MONTANA DEPARTMENT
OF NATURAL RESOURCES
AND CONSERVATION

2012 ANNUAL REPORT

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DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

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STATE OF MONTANA

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Dear Montanans,

Over the past eight years, it has been my honor to serve at the helm of the Montana Department of Natural Resources and Conservation. This agency really rocks in its service to you—the citizens of Montana. Every day, we at DNRC are out there in all kinds of weather—doing our best to manage our precious land and water resources.

During this last year, we fought ferocious fires throughout the state during one of the driest periods on record. We were 95 percent successful in our initial attack, dousing fire starts with water before a fire could grow to more than a few acres. Our guys in the white Huey helicopters wear the white hats.

While the rain was sparse, we continued to convene the Drought Committee to gather weather and resource information for Montanans to better understand our challenging conditions. We have also been working with watershed groups and landowners to help them cope with low stream flows and water conservation.

Through our many grant programs, we have sent over $6 million to give a helping hand to cities and towns who need funds for their water and sewers systems. We are a partner for all of our Montana communities—rain or shine.

We continue to do an awesome job of managing our Trust Lands for Montana's school kids. With record oil and gas leases, new grazing fees, and expanded commercial leases such as Cabela's in Kalispell, we are sending over $65 million to base aid for support of public education. We have added almost 12,000 acres of land in the past year for timber production, grazing, and ag production, plus the new lands that are open for hunting and fishing.

Every day of the year, Montanans,benefit from the work of DNRC every day, and I thank the 550 employees who take care of our special resources. You are the best!

Mary Sexton, Director
November 2012

Introduction

"Helping to ensure Montana's land and water resources provide benefits for present and future generations" is the mission of the Montana Department of Natural Resources and Conservation (DNRC).

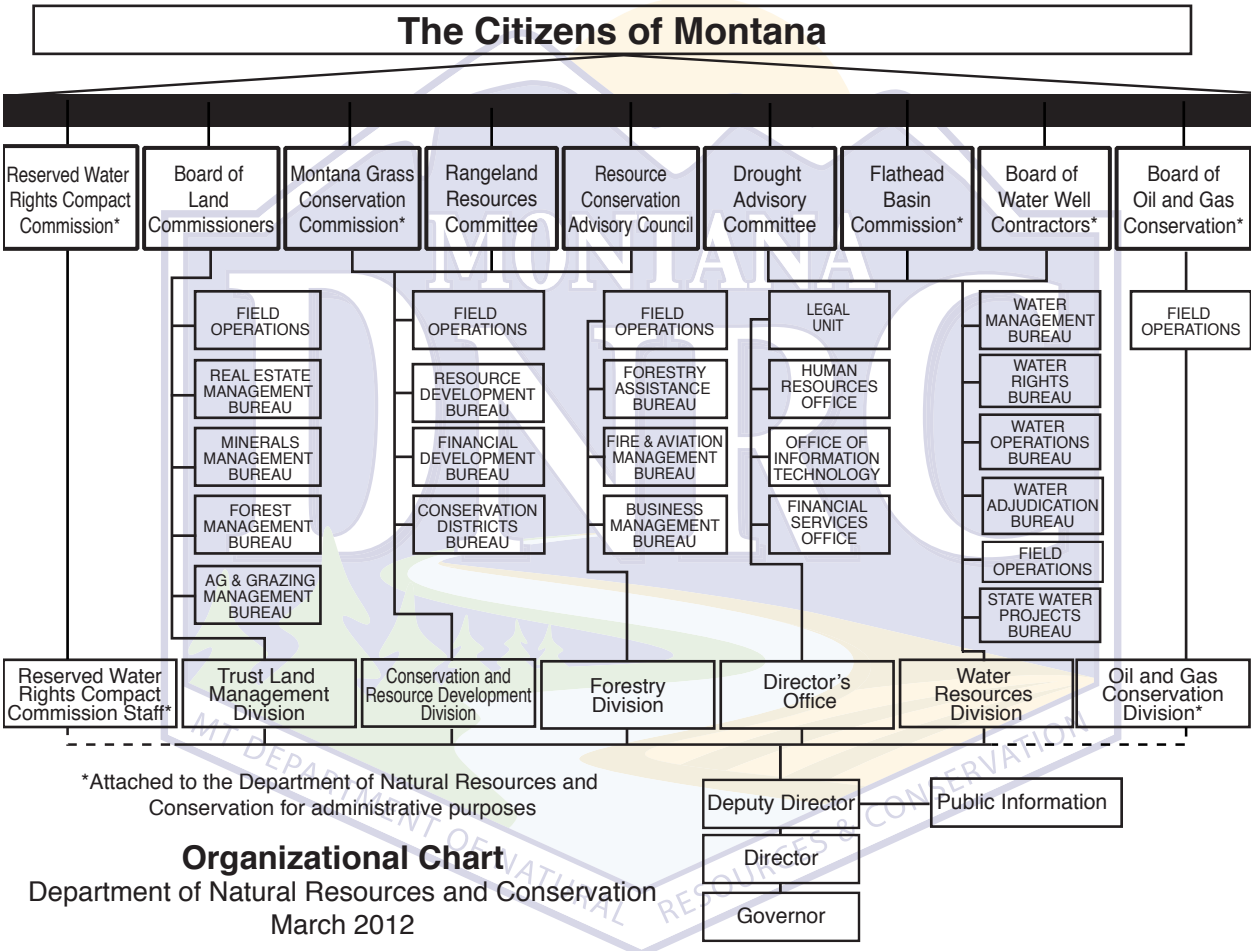
First established in 1971 as a result of the Executive Reorganization Act of 1971, the DNRC provides leadership in managing the state's natural resources. It is responsible for promoting the stewardship of Montana's water, soil, forest, and rangeland resources and for regulating forest practices and oil and gas exploration and production.

Department Organization

For the past eight years, DNRC has been led by Director Mary Sexton whose position is appointed by the Governor. The director oversees:

- Director's Office;
- Conservation and Resource Development Division;
- Forestry Division;
- Trust Land Management Division;
- Water Resources Division;
- Reserved Water Rights Compact Commission (administratively attached); and
- Board of Oil and Gas Conservation Division (administratively attached).

In addition, seven other boards and commissions are also attached to DNRC. The Board of Land Commissioners (Land Board), Board of Water Well Contractors, Flathead Basin Commission, and Montana Grass Conservation Commission all have decision-making authority. The Resource Conservation Advisory Council, Rangeland Resources Committee, and Drought Advisory Committee act in advisory capacities only.



Organizational Chart
Department of Natural Resources and Conservation
March 2012

Division Duties and Responsibilities

Director's Office

The Director's Office is managed by the director and deputy director and oversees operation of the entire department. It executes the department's mission and statutory responsibilities by administering, managing, planning, and evaluating total agency performance. The Director's Office is responsible for development of appropriate policies and procedures throughout all organizational units of the agency to ensure the structure supports optimum efficiency, consistency, and capability for planning, consultation, information technology, decision making, and fiscal management. The Director's Office consists of:

- the Deputy Director/Public Information Office;
- Legal Unit;
- Office of Information Technology;
- Human Resources Office; and
- Financial Services Office.

For more information regarding the Director's Office visit http://dnrc.mt.gov/Director/ or call 406-444-2074.

About the Director

Originally from Great Falls, Mary Sexton graduated from CMR High School and has degrees from Stanford University and The University of Montana.

Mary Sexton

She taught high school in Hamilton and was administrator of The Nature Conservancy's Pine Butte Swamp Preserve west of Choteau.

Mary is involved with both agricultural and tourism businesses. She has served on several boards, including the Public Wildlife/Private Lands Council, Bureau of Land Management (BLM) Resource Advisory Council, and on the Teton County Commission from 1999-2004.

Call 406/444-2074 to contact the director's office.

Deputy Director

Joe Lamson

Joe Lamson has worked on a wide variety of Montana natural resource issues for the past 34 years. He served as state director for former Congressman Pat Williams, and as state Land Board staff and communications director for Superintendents of Public Instruction Nancy Keenan and Linda McCulloch.

Joe joined DNRC in fall 2007. He works directly with the director and division administrators on management, planning, and budgeting to fulfill DNRC's mission. He also oversees the agency's public information activities. Call 406/444-9708 to contact the deputy director.

Conservation and Resource Development

The Conservation and Resource Development Division (CARDD) coordinates, supervises, and provides financial and technical assistance to Montana's 58 conservation districts. It also provides technical, financial, and administrative assistance to public and private entities to complete projects that put renewable resources to work, increase the efficiency with which natural resources are used, or solve recognized environmental problems. The division provides administrative support to the Montana Grass Conservation Commission. The division receives advice and guidance from two other attached bodies: the Resource Conservation Advisory Council and the Rangeland Resources Committee.

Ray Beck

The CARDD administrator is Ray Beck For more information, visit the CARDD web site at www.dnrc.mt.gov/cardd or call 406/444-6667.

Forestry

The Forestry Division protects the state's forested and nonforested watershed lands from wildfire; provides aviation services; operates a nursery and provides shelterbelt, windbreak, wildlife habitat improvement, reclamation, and reforestation plantings on state and private lands; and regulates forest practices and wildfire hazards created by logging or other forest management operations on private lands.


Bob Harrington

The Forestry administrator is Bob Harrington. For more information, visit the forestry web site at www.dnrc.mt.gov/forestry or call 406/542-4300.

Oil and Gas Conservation

The Board of Oil and Gas Conservation (BOGC) and its technical support staff are attached to the department for administrative purposes. The quasi-judicial board is comprised of seven members consisting of industry representatives, landowners, and an attorney. They administer Montana's oil and gas laws and the federal Underground Injection Control Program to promote conservation and prevent waste in the recovery of these resources through regulation of oil and gas exploration and production. The board and its staff issue drilling permits; classify wells; establish well spacing units and land pooling orders; inspect drilling, production, and seismic operations; investigate complaints; conduct engineering studies; and collect and maintain complete well data and production information.


Tom Richmond

The BOGC administrator is Tom Richmond. For more information, visit the BOGC web site at www.bogc.dnrc.mt.gov. or call 406/656-0040.

Reserved Water Rights Compact Commission

The Reserved Water Rights Compact Commission (RWRCC), which is also administratively attached to the department, was created by the legislature in 1979 as part of the water rights adjudication effort. Commissioners are appointed by the governor, the attorney general, the speaker of the House of Representatives, and the president of the Senate. The nine-member commission and its support staff negotiate water rights with Indian Tribes and federal agencies to establish formal agreement on the amount of water to be allocated to each interest.


Bill Schultz

The RWRCC administrator is Bill Schultz. For more information, visit the RWRCC web site at www.dnrc.mt.gov/rwrcc, call 406/444-6841 or e-mail dnrrwrcc@mt.gov.

Trust Land Management

The Trust Land Management Division (TLMD) is responsible for managing the surface and mineral resources of forested, grazing, agricultural, and other classified state trust lands to produce revenue for the benefit of Montana's public schools and other endowed institutions. The Board of Land Commissioners oversees the administration of the state trust land in Montana, as directed by the Montana Constitution. This board consists of Montana's top elected officials: the governor, superintendent of public instruction, secretary of state, attorney general, and commissioner of Securities and Insurance.


Shawn Thomas

The TLMD administrator is Shawn Thomas. For more information, visit the TLMD web site at www.dnrc.mt.gov/trust or call 406/444-2074.

Water Resources

The Water Resources Division (WRD) is responsible for many programs associated with the uses, development, and protection of Montana's water. The division also develops and recommends water policy to the director, governor, and legislature. The division comprises five bureaus—State Water Projects, Water Management, Water Operations, Water Rights, and Water Adjudication—and

Table 1
FY 2010 Expenditures

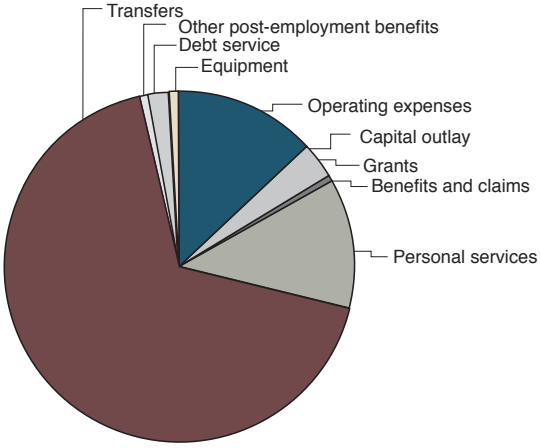
Total Expenditures by Activity

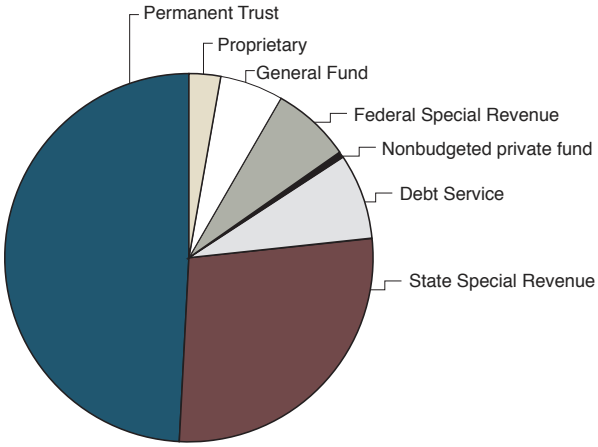
Personal services	$	38,144,545
Operating expenses		38,430,555
Equipment		1,234,230
Capital outay		11,128
Grants		7,751,815
Benefits and claims		2,783,450
Transfers		198,700,695
Debt service		10,254,205
Other post-employment benefits		62,220
Total	**$**	**297,372,842**

Total Expenditures by Fund Type

General fund	$	21,961,062
State special revenue		113,356,688
Federal special revenue		12,511,462
Debt service		25,000,725
Proprietary		2,824,895
Nonbudgeted private fund		235,685
Permanent Trust		121,482,325
Total	**$**	**297,372,842**

Figure 1
Activity





eight regional offices. Attached to the Water Operations Bureau is the Board of Water Well Contractors, a quasi-judicial board that can issue, suspend, or revoke licenses; promulgate rules and regulations; investigate complaints; and hold disciplinary hearings. The Flathead Basin Commission was transferred from the Governor's Office to DNRC for the 2005 biennium for administrative purposes. The Drought Advisory Committee is also attached to the Water Resources Division.

Tim Davis

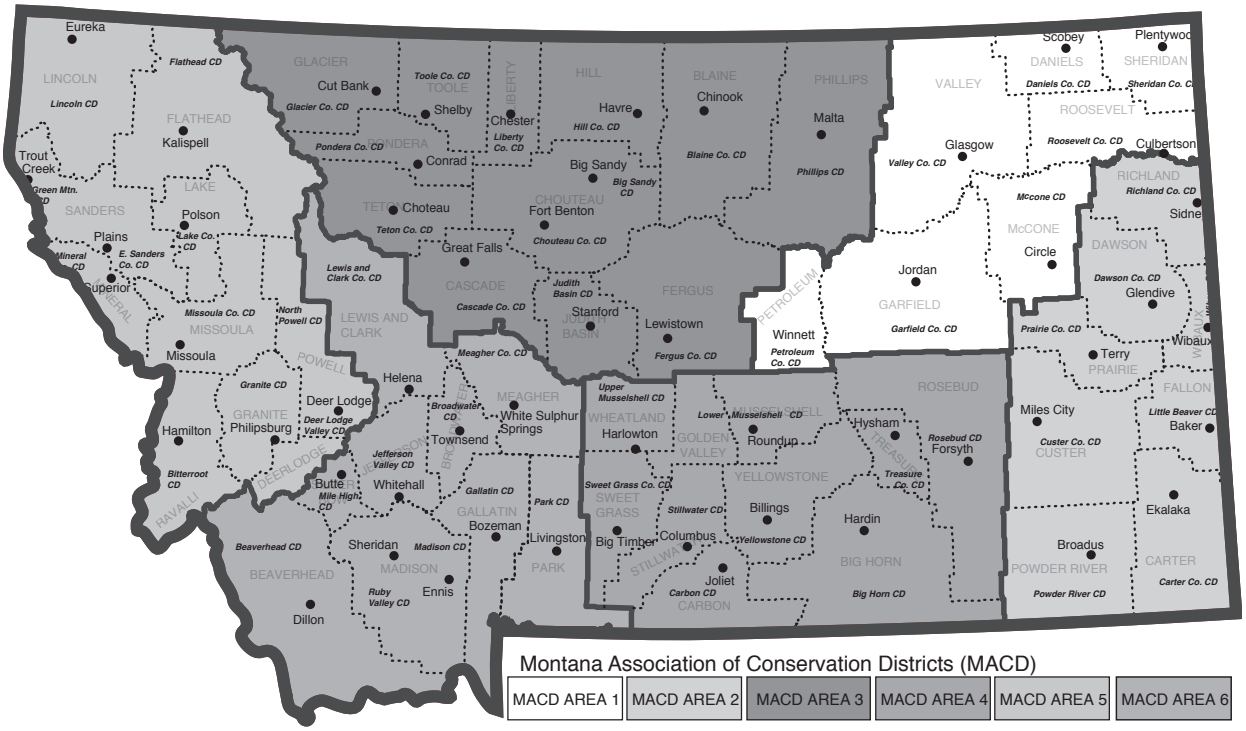
The WRD administrator is Tim Davis. For more information, visit the WRD web site at www.dnrc.mt.gov/wrd or call 406/444-6601.

Field Operations

Although the department headquarters is in Helena, field operations for the department's programs are performed through field offices and personnel in 29 different communities. Included are both full-time and seasonal employees from the Conservation and Resource Development, Forestry, Oil and Gas Conservation, Trust Land Management, and Water Resources divisions. To view area and current project information, please visit the field operations web site at www.dnrc.mt.gov/field_operations.

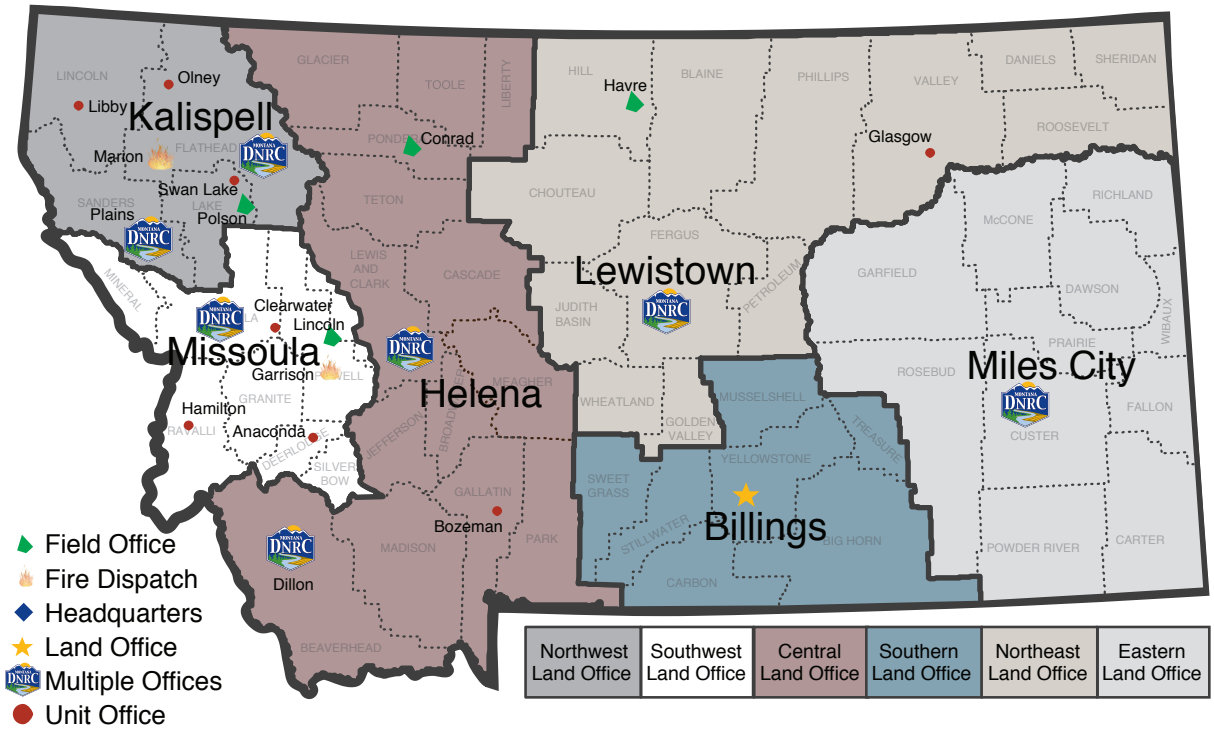
Conservation District Offices

Conservation and Resource Development offices are responsible for integrating and implementing programs for the Conservation and Resource Development Division.



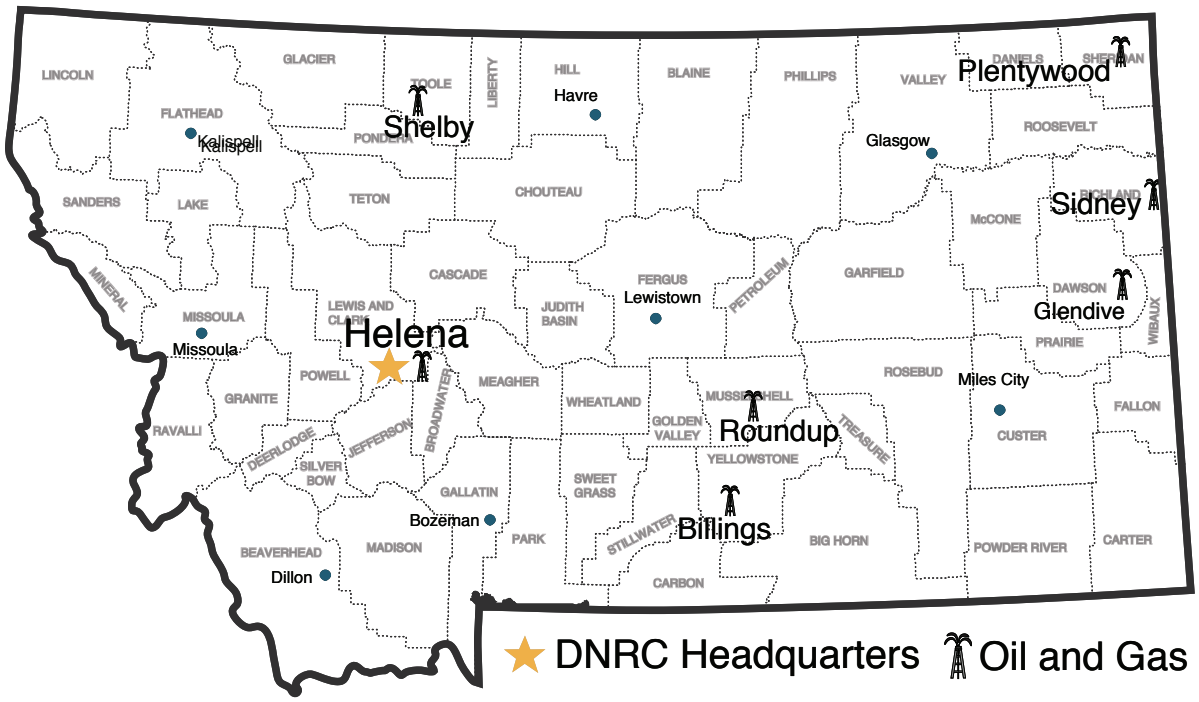
Area Offices

Area offices are responsible for managing and implementing programs for both Forestry and Trust Land Management divisions.



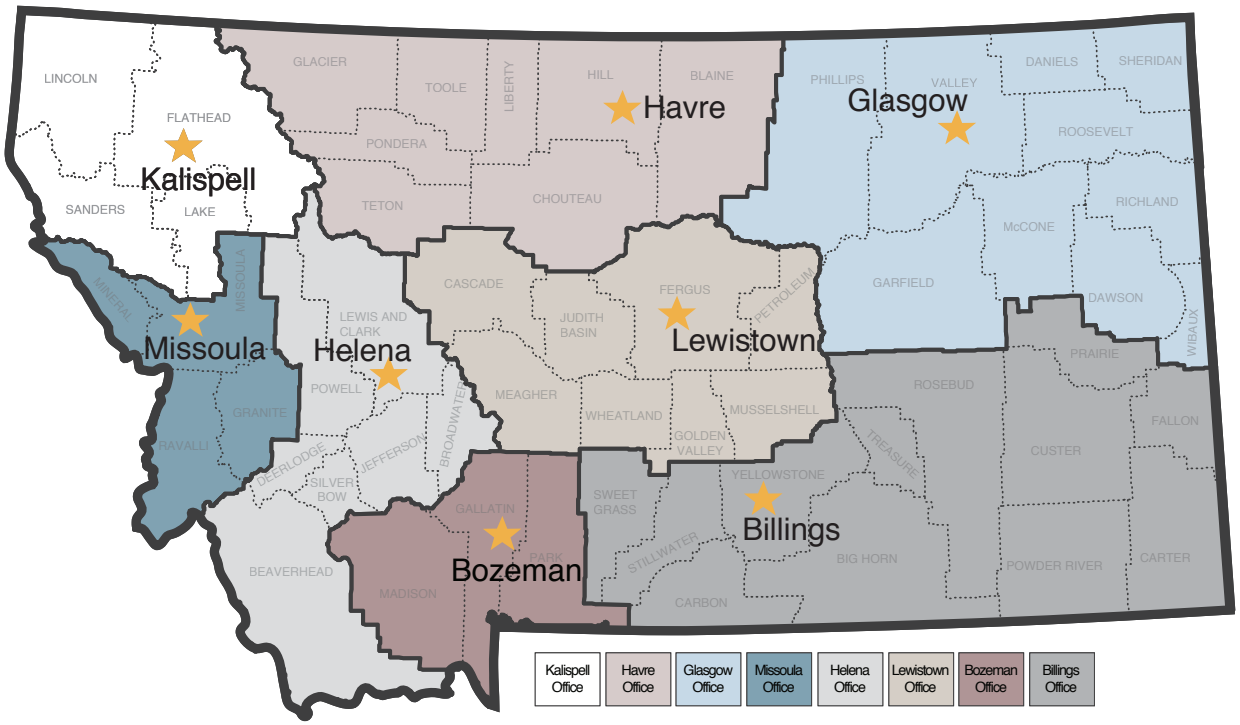
Board of Oil and Gas Conservation Offices

Oil and Gas offices facilitate programs for the Montana Board of Oil and Gas Conservation.



Regional Offices

Regional water offices are responsible for Water Resources Division operations and programs.



Ensuring Public Access to Public Information

Through its oversight of all DNRC programs, the director's office works to ensure that Montana's citizens have access to all the information and services that DNRC has to offer. The department recently expanded its use of technology by live streaming and archiving past audio recordings of Land Board meetings on its website. DNRC is also piloting the use of Facebook and Twitter to provide program information and fire updates and has increased the use of technologies to better use and update Geographic Information System (GIS) data. Work continues to enhance recruitment and selection techniques for better employment opportunities.

Using these different approaches, the director's office continues its goal of working toward providing department information to Montanans via the most accurate, usable, and current methods.

DNRC headquarters. Photo by John Grassy.

Director's Office

In FY 2012 the Director's Office was reconfigured from the reorganization of the Centralized Services Division (CSD). This new organizational structure incorporates CSD's previous functions, but with a streamlined structure and organization of duties. It also provides for direct oversight from the director and deputy director rather than secondary oversight by a division administrator.

Director Mary Sexton, right, celebrates Arbor Day with First Lady Nancy Schweitzer and Helena Mayor Jim Smith.

Public Information

Deputy Director Joe Lamson oversees the Public Information Office, which is run by Public Information Officer John Grassy. It oversees all media relations; coordinates media outreach and public information activities with DNRC leadership; provides media training and public relations expertise for DNRC staff; responds to public requests for information in conjunction with the Legal Unit; and provides leadership by assessing changing information technologies and opportunities. In FY 2012 the DNRC Public Information Office:

- produced and distributed statewide a public service announcement urging preparedness for floods in February 2011, anticipating potential spring flooding;
- responded to spring floods with timely health and safety information while continually updating information on resources for rebuilding and recovery;
- wrote, edited, and managed design, layout, and production of a four-color, 108-page coffee table book on State Trust Land called *Making Hay for Education*;
- conducted a 15-month review of social media as its use pertains to DNRC. That review included examining legal, technical, and administrative issues; availability of platforms; and social media's actual applicability to DNRC programs; and
- launched two social media pilot projects: a Facebook page for the Rangeland Resources Program and a Twitter feed for the Fire and Aviation Management Bureau.

Legal Unit

The Legal Unit is led by Chief Legal Counsel Candace West. It is responsible for providing legal services to all programs within DNRC. These services include legal advice, review and drafting of legal documents, and representation in administrative and judicial proceedings. The internal Support Unit oversees administrative operations for not only the Legal Unit, but also the director and Land Board. In FY 2012 the Legal Unit:

- worked with OIT to continue upgrading the reporting capabilities and functioning of its Legal

Tracker case file database. The upgrade resulted in even greater work efficiency for attorneys and support staff;
- successfully litigated cases quieting title to trust lands and protecting the revenue generated from those lands along with royalty streams from development;
- litigated enforcement of the Water Use Act by preventing illegal uses, illegal impoundments, and illegal expansion of historic uses of water;
- continued to improve management and accessibility to both paper and electronic records through its management of the DNRC Records Management and Imaging Committee. Assuming adequate funding is procured, DNRC can begin moving forward with an Enterprise/Electronic Content Management System for its records;
- oversaw the organization of policies, procedures, and guidelines into a consistent format. These documents are now posted to a new employee web page to facilitate staff education and access to important department information applicable to all employees; and
- adopted audio minutes as the official Land Board record and began posting those on the web site to improve public access to public meeting records, while increasing staff efficiency and reducing operating costs.

Human Resource Office (HRO)

The Human Resource Office is headed by Human Resource Officer Kerry Davant. Its mission is to manage a full cycle human resource program that addresses safety, recruitment and selection, on-boarding, policy development, compensation, career development, performance management/evaluation, and succession planning. In FY 2012 the Human Resource Office:

- converted the employee *Vehicle Use Agreement* to an annual on-line review and confirmation process;
- identified the performance management system DNRC will adopt;
- adopted a new exit interview format;
- adopted new markets for all DNRC occupational titles; and
- developed and conducted recruitment and selection training.

Office of Information Technology (OIT)

The Office of Information Technology is led by Chief Information Officer Bill Anker. It provides quality, cost-effective information technology for DNRC to fulfill its mission. OIT works to optimize existing technology and implement new technologies that will improve productivity, manage costs, and meet the business needs of the agency. It provides network and client support, application development, data and systems management, and GIS development services, as well as coordinating DNRC operations with the State Information Technology Services Division (SITSD). In FY 2012 the Office of Information Technology:

- reorganized IT structure and operations to improve oversight and coordination, better leverage existing resources, address gaps in capabilities, increase service efficiency and effectiveness, and ensure alignment between service offerings and business needs;
- expanded video conferencing system availability and investigated new remote communications technologies to improve communication efficiency and reduce travel costs among highly mobile, geographically dispersed staff;
- expanded the use of GIS technologies to improve the efficiency and effectiveness of field data collection, retrieval, and analysis, including integration with existing information systems, use of mobile technologies, and initiating the development of an agencywide coordinated GIS infrastructure;
- developed and implemented mobile device policies and procedures including pilot deployment of smartphones/tablets and initial development of internal technical capabilities as part of the department's long-term strategy to leverage mobile and GIS technologies;
- implemented significant improvements to critical database systems, including the Trust Land Management System and Contracts and Grants System;
- completed conversion of Novell servers to Microsoft servers to ensure long-term support of critical internal infrastructure; and
- completed preparation for implementation of the SITSD 802.1x network device authentication project.

Financial Services Office (FSO)

The Financial Services Office is led by Chief Financial Officer Tricia Schiltz. Its goal is to provide operations support to all DNRC divisions in accounting, budgeting, procurement and contracting, and payroll. FSO ensures that the department's fiscal management practices are consistent with Generally Accepted Accounting Principles and state accounting policy. It also provides timely and accurate DNRC-related financial information to department managers, the Governor's Office, the Legislature, and federal agencies.

- FSO was greatly affected by the reorganization of CSD into the Director's Office. Its reorganized structure integrated fiscal operations, procurement and contracting, and payroll functions under one umbrella to better utilize resources while increasing service, efficiency, and effectiveness for DNRC, its employees, and the state.

Web sites featured in this section:

www.dnrc.mt.gov/director

Conserving, Planning, Educating

The Conservation and Resource Development Division (CARDD) staff works with Montanans to protect, improve, and utilize the state's resources efficiently.

CARDD makes loans to fix a town's leaky water lines and repair wastewater systems. CARDD offers education to youth and landowners to prevent erosion of our soils and to learn about grazing land management. CARDD contributes funds to clean up abandoned waste sites.

These actions make life better for Montanans every day.

Daly Ditches Hedge Canal repair. Photo by Bob Fischer.

Conservation and Resource Development Division

Provide technical and financial assistance to local governments, state agencies, and private citizens for the conservation, development, protection, and management of the state's natural resources.

The Conservation and Resource Development Division (CARDD) helps manage natural resources and finances conservation, resource management, and reclamation activities. The division has 27 employees who administer the work of the Conservation Districts Bureau, the Financial Development Bureau, and the Resource Development Bureau.

For more information, please visit our web site at www.dnrc.mt.gov/cardd.

Twin Bridges Wastewater Project – Zach Owen

Conservation Districts Bureau

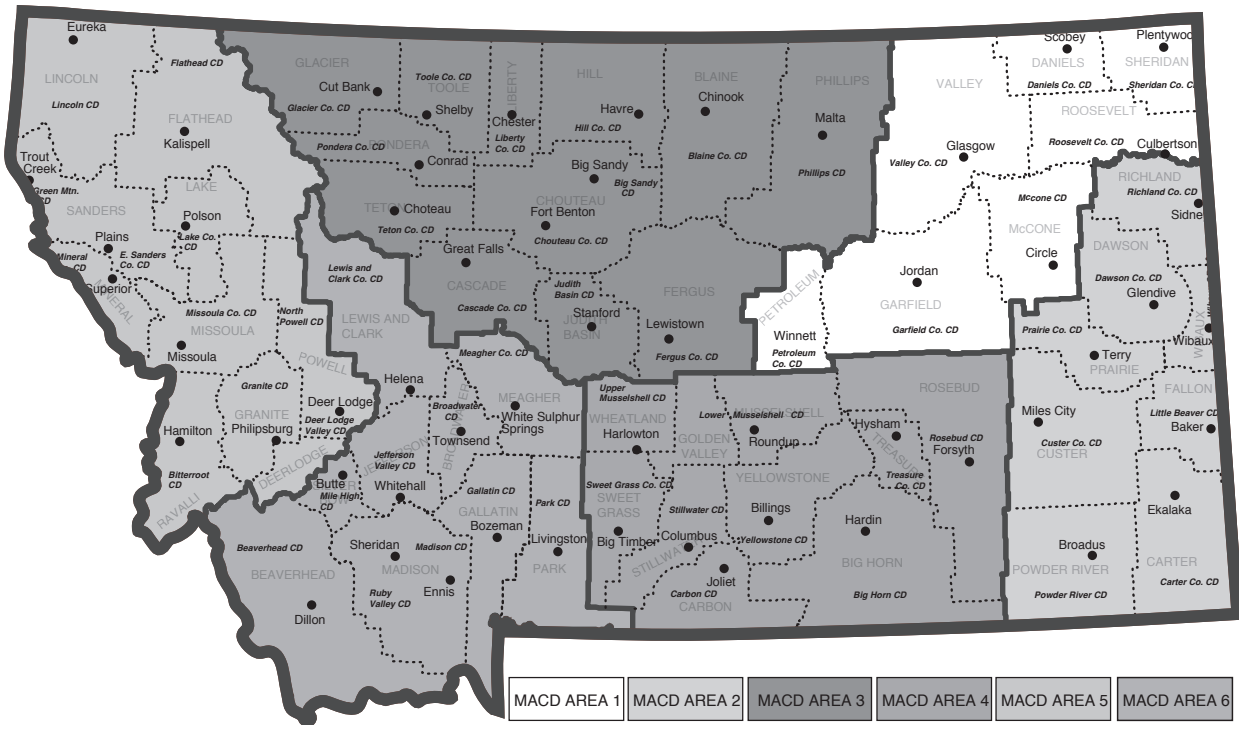
Under state law, the Conservation Districts Bureau (CDB) is responsible for assisting Montana's conservation districts and state grazing districts. A conservation district (CD) is a legal subdivision of state government that: (1) develops and carries out long-range programs that conserve and improve soil and water resources within its boundaries, and (2) encourages maximum voluntary participation by the general public and all local public and private agencies to fulfill this purpose. The CDB works with Montanans on nine resource management and conservation areas:

- conservation district supervision and assistance;
- watershed efforts and projects;
- rangeland management coordination;
- stream/water quality improvement and protection
- natural resource conservation education activities;
- grant and loan programs;
- resource conservation and development
- salinity control
- private land fire rehabilitation

Fiscal Year 2012 Highlights

By law, the CDB is required to provide administrative, technical, legal, and financial assistance to Montana's 58 conservation districts (see Figure C-1. This assistance is provided to CDs through a variety of programs developed to assist CDs in meeting mandated duties. CDs are political subdivisions of state government that address soil and water conservation and administer the Natural Streambed and Land Preservation Act. In FY 2012, CDB staff provided training and orientation for new administrator orientations; outlined the roles and responsibilities of supervisors (fiscal, legal, management, district operations); offered realtor workshops; sponsored conservation events, and assisted with stream-permitting seminars that educated contractors, CD supervisors, and land owners. CBD generated a new approach to its annual area-wide district meetings by sponsoring a national consultant and expert on conservation district management. At each meeting, CD's were encouraged to plan, develop, and execute a project. DNRC set aside $100,000 for the planning process. As a result of the support and fiscal assistance, 223 grant applications

Figure C-1
Montana's Conservation Districts



increased and for the first time, CD's submitted nineteen applications to the Resource Renewable Grant & Loan Program (RRGL) and four proposals to the Reclamation & Development Grant Program (RDGP).

CBD staff assists the Coal Bed Methane committee in developing procedures to administer the Coal Bed Methane protection act and manages the coal bed methane protection account.

The Resource Conservation Advisory Council (RCAC) is staffed by the CDB. There are five RCAC members and they hold two annual meetings.

Current members are:

Member	Town	Representing
Pete Dallaserra	Butte	General Public
Marieane Hanser	Billings	South Central Montana
Lauraine Johnson	Plains	Western Montana
Buzz Mattelin	Culbertson	Conservation Districts
Ramsey Offerdal	Conrad	North Central Montana

The CDB continues to work closely with the Montana Association of Conservation Districts (MACD) and the National Association of Conservation Districts to address natural resource concerns at the state and national levels.

Grant Programs

CDB administers five grant programs that include the 223 Grants, Mini-Education Grants, Watershed Planning and Assistance Grants, and Legal and Technical Assistance Grants.

223 Grant Program-Project Grants

The Conservation District 223 Grant Program was established in 1981 to provide funding for lawful duties and responsibilities of CDs. The program funds a variety of CD activities such as: stream bank protection, erosion control, new conservation technology demonstrations, soil and water conservation projects, youth and adult educational activities, and conservation equipment rental programs. In FY2012, $405,698 was contracted to CDs for various projects. All CD project grants awarded in FY 2012 are listed in Table C-1. The amount shown is the amount approved, not necessarily the amount spent.

Table C-1
FY 2012 Conservation District Project Grants Awarded

Project	Award Amount		
Broadwater	2012 Montana Youth Range Camp	$	12,463
Broadwater & Agriculture Oral History Project	From the Ground Up, Montana Women		$9,000
Broadwater	Publication & Distribution of CD Newsletter		15,000
Dawson County	Soil Health & Awareness Through Cover Crops		15,000
Deer Lodge Valley	Upper Clark Fork River Coop Staff		7,800
Flathead	Trumbull Creek Restoration Project		25,000
Gallatin	MT Pollinator Project		22,200
Garfield	Garfield Irrigation Project for Lower Musselshell		15,000
Garfield	CMR Pilot Project Phase III		15,000
Garfield	CMR Pilot Project Phase I		15,000
Garfield	Ladies Day on the Range		500
Glacier	Cut Bank Community Garden		4,400
Glacier County	New Trends in Agriculture Seminar		4,075
Hill	Beaver Creek Park Rd Repair & Reclamation		14,960
Hill County	Fresno Roadway/Trail Repairs		9,369
Judith Basin	Rangeland Coordination		12,000
Lincoln	Lincoln County Bio Control for Noxious Weeds		13,278
Lincoln	Water Resources/Permitting Guide		3,222
Little Beaver	Low Stress Livestock Handling Workshop		5,500
Lower Musselshell	Delphia Melstone So. Canal Bank Failure		15,000
Lower Musselshell	2011 Governor's Range Tour		9,350
Lower Musselshell	Administrative Funds		10,000
McCone	1938 Aerial Photo Restoration		749
McCone	Redwater Watershed Bio Warfare on Noxious Weeds		14,805
Mile Hi	Browns Gulch Phase I Channel Design		14,500
North Powell	Blackfoot Irrigation Scheduling & Water Management		14,840
Petroleum	Participation in the MRRC Committee		15,000
Pondera County	Winter Grazing Seminar		8,157
Prairie County	Demonstration Planting		10,000
Sweet Grass	Big Timber Creek Project Completion		6,095
Yellowstone	Salt Cedar Management Yellowstone County		15,000
Yellowstone	Pryor Creek Inverted Siphon Crossing		25,000
Yellowstone	310 Tour		900
Various CDs	Allocate to CD's for new computers to run Quick Books		3,535
Various CDs	Mini Grants (see below)		8,132
Various CDs	Computer/Administrative Equipment		4,000
Various CDs	Supervisor travel		15,000
		TOTAL $	**405,698**

Conservation Education Mini-Grant Program

The mini-grant program, supported by 223 funds, makes awards up to $500 for projects that promote conservation education for children or adults. Funds have been used for a wide variety of projects. In FY 2012 the mini-grant projects listed in Table C-2 were funded for a total of $8,132.

Administrative Grants

In FY 2012, the CDB distributed $381,461 to 37 conservation districts where county mill levies were inadequate to support district administrative operations. The majority of the funds were allocated to employee salaries and other operating expenses in some of the smallest communities in Montana. Funding for this program comes from the General Fund and Coal Tax.

Table C-2
FY2012 Conservation Education Mini-Grants (Awarded)

Conservation District	Project	Amount
Beaverhead	Field trip to Birch Creek	$ 500
Broadwater	Recycle Reuse Program	497
Cascade	Soil Health Seminar	500
Deer Lodge	Hands on at the ranch	360
Deer Lodge	Field trip transportation costs	190
Gallatin	Stream Pollinator Program	500
Garfield	Oil & Gas Seminar	500
Glacier CD	Conservation in the park (two awards)	1000
Jefferson	Stream table for classroom instruction	500
Lower Musselshell	Water measurement record books for irrigators	345
Missoula	Sussex School Science Project	500
Pondera	Natural Resource Outdoor class	500
Rosebud	Cold composting class	300
Stillwater	Conservation day	500
Teton	Creeks to Critters	500
Valley	Outdoor classroom	440
Yellowstone	Nile program for 4th graders	500
	Total	**$ 8,132**

Information on the Coal Severance Tax and Resource Indemnity Fund (RIT) can be found in Appendix A.

Watershed Planning and Assistance Grant Program

Through the capacity-building program, CDs have identified the need for watershed planning as a high-priority goal. CDs, the local entity responsible for addressing nonpoint source water pollution, play a significant role in developing locally led watershed efforts. CDB provides technical and financial assistance to conservation districts in support of watershed efforts. CDB also participates on the Montana Watershed Coordination Council (MWCC), a group of private organizations, state and federal agencies that coordinate watershed management programs in Montana.

The purpose of the Watershed Planning and Assistance Grant Program (WPAG) is designed to assist CDs and affiliated local watershed groups with expenses associated with watershed planning. Funds can be used for collection of baseline resource information, facilitators, development of a watershed management plan, training, educational efforts, incidental costs associated with watershed planning, and planning efforts related to specific projects.

In FY 2012, 8 grants totaling $57,057 were awarded. The size of these projects ranged from small watersheds to large basins. The funded grants are listed in Table C-3.

Rolling Rivers Trailers

CDB collaborates with MACD in the Rolling Rivers Trailer Program by providing technical support, such as coordinating the statewide Rolling Rivers program, and providing training for presenters. CDB also makes presentations with the Rolling River which is a dynamic educational model that demonstrates how streams work and the impacts that humans can have on streams. The trailer demonstrates principles related to riparian management such as stream health, riparian stewardship, implementation of Best Management Practices (BMPs), impacts related to development within the riparian areas, and prevention of soil erosion.

Four Rolling River trailers are based across the state. Each trailer has a sponsor that is responsible for maintenance and operation. The trailer locations and their sponsors are: Helena CDB, Kalispell/Flathead CD, Sidney/Richland CD, and Great Falls/Cascade County CD. Since 2003, the four Rolling Rivers trailers have made presentations to more than 25,500 adults and children. Annually the trailer presentations reach over 2,500 people including both youth and adults.

Rangeland Resource Program

The Rangeland Resource Program has four major areas of emphasis:

Table C-3
Watershed Planning and Assistance Grants Awarded in FY 2012

Conservation District	Watershed Group Name	Grant Amount
Beaverhead	Beaverhead Watershed Group	$ 11,000
Petroleum	Musselshell-Mosby Watershed Group	1,760
Teton	Teton River Watershed Group	8,715
Ruby	Big Hole Watershed Committee	3,300
Stillwater	Stillwater Valley Watershed Council	9,972
Sweet Grass	Swamp Creek Watershed Group	8,417
Park	Shields/Upper Yellowstone Groups	8,342
Phillips	Milk River Watershed Alliance	5,551
	Total	**$ 57,057**

- working with county range committees, conservation districts, and producer groups to foster sound rangeland management;
- encouraging coordination and cooperation between private, state, and federal entities involved in range management;
- administering the Rangeland Improvement Loan Program, and
- co-sponsoring the Governor's Range Tour, Winter Grazing Seminar, and Montana Youth Range Camp.

The program receives guidance from the Rangeland Resource Executive Committee, comprised of six ranchers from across the state and appointed by the governor.

Members include:

Chairman: Steve Hedstrom, Raynesford
Vice-Chair: John Hollenback, Gold Creek
Les Gilman, Alder
Diane Ahlgren, Winnett
Tracy Hentges, Wolf Point
Noel Keogh, Nye

In addition, an ad hoc committee of agency and organization personnel serves in an advisory capacity to the executive committee.

CDB staff work to strengthen local grazing management programs by helping sponsor workshops, tours, and demonstration projects. Examples of these activities include the Governor's Range Tour, Montana Youth Range Camp, and Winter Grazing Seminar. The 2005 legislature and the executive branch approved re-establishment of funds for a full-time rangeland resource program specialist.

The FY2012 Montana Youth Range Camp was conducted near Brusett at the 7V Ranch. The event was hosted by Garfield CD with assistance from Petroleum CD. Twenty-four youth attended this year.

The Governor's Range Tour was hosted by Lower Musselshell CD in September 2011 and featured landowners in Musselshell and Golden Valley Counties; the tour attracted 100 participants.

The Winter Grazing Seminar was hosted by Pondera, Toole, Liberty and Glacier CD's in January 2012 in Conrad with many informative speakers and attendance of approximately 125.

A range improvement loan program (RIP) was started in 1979 to improve rangelands in Montana. Since the program began, 262 applications have been received for loans totaling $5,385,264 with 163 loans approved for $3,374,000. A typical rangeland loan project involves drilling a well and installing underground water lines to supply stock tanks. These stock tanks are usually in areas where water is insufficient or unsuitable for livestock. The projects are sometimes combined with cross fencing and an overall grazing plan to improve the rangeland. Over 1 million acres of Montana range land have been improved using funds from this program.

Grazing District Supervision and Assistance

State law provides for the creation of cooperative, nonprofit grazing districts. The law also sets up a permitting system that aids in management of grazing lands, where ownership is intermingled, to conserve, protect, restore, and properly utilize grass, forage, and range resources. In its administration of the Montana Grass Conservation Act (grazing district law), the Montana Grass Conservation Commission, administratively attached to DNRC, advises, supervises, and coordinates the formation and operation of these grazing districts. Uniform plans that conform

to recognized conservation practices are developed for use of lands within boundaries of districts. The 27 state grazing districts represent 1,353 permittees and cover 10,501,070 acres of land.

In FY 2012, the commission was composed of these five members:

Steve Barnard, Hinsdale
Sonny Obrecht, Turner
Leo Solf, Winnett
Dan Teigen, Teigen
Alvin Windy Boy, Box Elder

Stream Protection

CDB provides assistance to CDs in administration of the Natural Streambed and Land Preservation Act, commonly referred to as the "310 law." Under it, CDs issue permits for projects on perennially flowing streams.

CDB coordinates permitting activities among permitting agencies to help provide better service to applicants. CDB hosts a stream-permitting web site with information about how to apply for a permit, agencies involved, and project selection. The web site also includes a database that will allow CDs and the public to track issued 310 permits sorted by CD or waterbody.

In FY 2012, CDB revised, reprinted, and distributed *A Guide to Stream Permitting in Montana*, which provides information about when permits are needed and agency contact information. CDB convened the 310 Committee, comprised of state, federal, and local agencies, as well as other interested groups, to update and improve the Joint Application for Streams and Rivers in Montana.

CDs processed 1948 stream permits and CDB distributed $100,000 to 48 conservation districts; the amount allocated to each district was based on the number of permits issued to help offset the cost of administering the act.

Missouri River Conservation District Council

The Missouri River Conservation District Council (MRCDC) is comprised of 16 conservation districts. In FY 2012 the CDB distributed $106,000 to MRCDC. Funding supports planning and educational efforts on the Missouri River. The MRCDC secured formal advisory seats with two federal agencies that manage significant parts of the Missouri River corridor. Working with the BLM and U.S. Fish and Wildlife Service will allow the MRCDC to participate in planning to provide consistent management. The MRCDC provides input and participates in the $85 million federal recovery efforts along the Missouri River and is a member of the federally mandated Missouri River Recovery Implementation Committee (MRRIC).

Yellowstone River Conservation District Council

The River Conservation District Council (YRCDC) created in 1999 is comprises of 12 conservation districts. In FY 2012, the CDB distributed $92,000 to support the activities of the Council. One of the Council's main decrees is the oversight and management of a $6 million Cumulative Effects Study that covers the entire 600 mile stretch of the Yellowstone River. The study will be completed by 2015.

Natural Resource Conservation Education Activities

This program provides grant funding and policy guidance for resource conservation education programs. The CDB assists CDs in sponsoring adult education, elementary and secondary school activities, and several annual events: the Envirothon at Lewistown, Montana Youth Resource Camp, and Natural Resources Youth Range Camp. Program goals include promoting discussion of resource issues and providing the knowledge and skills necessary to make decisions regarding the management, protection, and wise use of our natural resources.

Resource Conservation and Development Area (RC&D)

The RC&D is a continuation of regional effort, started in partnership with U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). The bureau is taking a lead role in assisting natural resource conservation and development activities in central and eastern Montana.

The Central Montana RC&D Area has been involved in the following activities during FY2012:

- Continued work on the five-county Musselshell-Judith Rural Water System. In the past year the effort has secured over $600,000 to complete formal feasibility work and initiate additional well drilling activities for the area.
- Assisted with development and management of a web-based GIS system on the total main-stem of the Musselshell River in partnership with multiple user groups and state agencies.
- Conducted monthly first-time homebuyer training sessions, required by several mortgage providers and offered foreclosure counseling services to the area.

David Martin teaching a Water Riparian Class at the Montana Youth Range Camp. Photo by Ross Campbell.

Governor's Range Tour hosted by Lower Musselshell CD. Photo by Heidi Crum.

- Continued to provide technical assistance to the Mosby-Musselshell off stream storage project.
- Participated in negotiations between federal agencies and the RWRCC for water reservation requests.
- Provided grant writing and administration services for multiple area resource organizations.
- Initiated flood mapping related to the 2011 floods on 320 miles of the Musselshell River.
- Joined Housing Advisory Committee for Snowy Mountain Development Corporation.

Montana Salinity Control Association

The Montana Salinity Control Association (MSCA) is a satellite program for CDs, established to reclaim and prevent saline seeps and other agricultural-related water quality problems, on an individual farm and/or watershed basis. MSCA originated in 1979 in nine counties but has since expanded to serve 34 counties. MSCA is partially funded from mineral funding administered by DNRC/CARDD and received $243,000 in FY 2012. MSCA competes for federal grants to address non-point source pollution (NPS) on a watershed basis and generates additional funding through user-fees from producers and groups, and other granting sources.

Conservative estimates indicate that over 300,000 cropland acres in Montana were affected by salinity problems. MSCA has developed individual reclamation plans for 1,235 sites, with 141,739 planned acres, to address salinized acres that were no longer productive. Eighteen salinity-based watershed projects ranging from 4,000 acres to over 625,000 acres are in progress or have been completed. MSCA provides technical assistance in these watersheds. Each watershed project has a local advisory group that contributes funds and/or provides coordination between landowners and technical agencies.

Several irrigation-based salinity projects have been initiated by MSCA working with producers, USDA-NRCS, Bureau of Indian Affairs (BIA), and irrigation districts/companies. Projects involve detecting seepage from irrigation infrastructure and implementing methods to reduce leakage and improve irrigation efficiencies. MSCA is involved in the organization of individual and watershed-scale saline projects working through local CDs, with assistance from the CARDD/DNRC staff. Each year MSCA receives requests from CDs, private landowner/operators, USDA personnel, irrigation groups, and watershed groups for technical assistance. While geographical emphasis changes, overall requests remain consistent, indicating the need to maintain the MSCA technical assistance program.

MSCA coordinates with state and federal agencies to utilize and adapt their technical assistance and funding programs to address nonpoint source pollution and other resource concerns. MSCA works with watershed groups and CDs to develop reasonable and science-based Total Maximum Daily Load (TMDL) plans on specific watersheds. Federal programs within USDA and Environmental Protection Agency (EPA) are utilized to assist individual producers in implementing the remediation methods MSCA recommends to achieve saline reclamation. A video documenting MSCA field procedures and reclamation techniques for dry land salinity is used for USDA training purposes. In North Dakota state and federal agencies have requested MSCA assistance in providing technical assistance.

With the increase in coal and petroleum exploration/production across Montana, there is potential for contamination of surface and ground water, and soil resources. MSCA will facilitate soil and water data collection prior to problems arising for baseline comparison, working with CDs and private landowners.

Whitefish Project. Photo by Bob Fischer.

Eureka WRF Project. Photo by Bob Fischer.

MSCA currently assists CDs and individual well owners to obtain baseline ground water quality information, primarily prior to Coal Bed Methane (CMB) and oil/gas production and exploration.

Financial Development Bureau

The Financial Development Bureau is responsible for preparing and managing the cash flow of the division's programs. The bureau also issues loans to borrowers and manages the financial administration of Montana's Water Pollution Control State Revolving Fund (WPCSRF) and Drinking Water State Revolving Fund (DWSRF) loan programs. Functions of the bureau include:

- issuing general obligation bonds;
- issuing Coal Tax Bonds;
- monitoring the operating budget of the division;
- preparing cash flows for:
  - Water Pollution Control Program;
  - Drinking Water Program;
  - Reclamation and Development Grants Program;
  - Renewable Resource Grant and Loan Program;
- monitoring financial statements of public borrowers;
- monitoring arbitrage calculations for all DNRC bonds; and
- administering loans made to public entities.

With passage of the WPCSRF and DWSRF legislation, the volume of work dictated formation of the Financial Development Bureau. The loan portfolios alone have grown to over $652.3 million (see Table C-4).

Disbursements to grantees can be as much as $6.5 million per year. Approximately 750 to 1,000 contracts are in place at any one time. Financial expenditures on each contract are tracked separately. Cash flows are produced monthly. For the revolving fund programs, investments must be made for repayment funds in the program.

Table C-4
Loan Portfolios as of FY2012

Type of Loan	Amount
Coal Tax Loans	$ 98,900,900
Water Pollution Control Loans	354,648,703
Drinking Water Loans	198,754,462
Total	**$ 652,304,065**

Bond sales are planned to meet the construction schedules of the borrowers. On average, $5 million to $10 million in bonds is issued each year. In FY 2012, more than $10,500,000 million in bonds and notes were issued. Loan disbursements were over $20 million in FY 2012.

Water Pollution Control State Revolving Fund Loans

The WPCSRF was created by the 1989 egislature. It is designed to combine federal grant money with state matching money to create a low-interest loan program that funds community wastewater treatment projects. DNRC and the Department of Environmental Quality (DEQ) co-administer the WPCSRF program. EPA grants federal funds to the state. The state must match at least 20% of that grant. The state's share is derived from the sale of state general obligation bonds. From 1991 to 2003, the interest rate was 4% for up to 20 years. In FY 2004, the interest rate dropped to 3.75%; this rate continued in FY 2012. FY 2013 will see a decrease in the program interest rate.

Since the program started, the state has issued $35.6 million in general obligation bonds and notes, and EPA has contributed $176.6 million in grants. These state bonds and federal grants, together with $142.4 million in "recycled" (repaid) loan funds, account for the $354.6 million program level. Fourteen loans totaling $5,587,507 million were closed in the FY 2012 construction season. See Table C-5 for a listing of current loans. Program staff expects to make loans of $25 million in FY 2013.

In FY 2012 the Town of Bear Creek borrowed $278,000 to replace their lift station. The WPCSRF provided a short-term loan at 2.75%. The project also included the installation of more energy efficient pumps.

The Bridger Pines Water and Sewer District is constructing a wastewater treatment system. The community had been under enforcement provision for a number of years. This will allow the community to be in compliance with DEQ requirements. They received two WPCSRF loans totaling $985,000.

Drinking Water State Revolving Fund Loans

The DWSRF provides funds for training, technical assistance, and the issuance of low-interest loans to local governmental entities to finance drinking water facilities and implementation of the Safe Drinking Water Act. State enabling legislation was passed in 1995 and amended in 1997, after the U.S. Congress passed federal enabling legislation in August 1996. DNRC and DEQ co-administer the Drinking Water Program. The two agencies first applied for federal funds in January 1998.

The state has issued $22.7 million in general obligation bonds and notes, EPA has obligated $142.3 million, and $55 million in "recycled" (repaid) loans have been used to fund loans for a program level of $220 million. Nineteen loans totaling over $23.5 million were closed in the 2012 construction season. See Table C-6 for a listing of current loans. Program staff expects to make loans of $11.3 million in FY 2013.

Of the 20 loans closed in FY2012 one loan was to the City of Libby. This $500,000 is for a rehabilitation design of the city's water system. The Libby dam is the city's water source. The dam and the city's entire water system are old and in need of rehabilitation. When all the work is done this project cost is estimated to be in excess of $7 million. This $500,000 is the start of that project. It has an interest rate of 1.25%

Resource Development Bureau

The Resource Development Bureau (RDB) administers several grant and loan program to government and private entities and provides assistance to conservation districts for administration of water reservations and to landowners to develop new irrigation. The programs include:

- Reclamation And Development Grants Program
  - Project Grants
  - Planning Grants
  - Aquatic Invasive Species Grants
- Renewable Resource Grant And Loan Program
  - Project Grants
  - Planning Grants
  - Emergency Grants and Loans
  - Public Loans
  - Private Grants and Loans
  - Irrigation Development Grants
  - Conservation District Water Reservations
  - Regional Water Program

Smith Lake Dam. Photo by Bob Fischer.

FY 2012 was a successful year for these programs. A record number of communities and conservation districts received planning grants, the new aquatic invasive species control program got off the ground immediately after flood waters receded, and Montana's first regional water treatment plant went on line. The Resource Development Bureau disbursed approximately $24.4 million in grant and loan funds and administered 279 grant contracts during FY 2012.

Reclamation and Development Grants Program

The Reclamation and Development Grants Program (RDGP) is designed to fund projects that "indemnify the people of the state for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana" (90-2-1102, MCA). The program was established in 1987. Any department, agency, board, commission, or other division of state government or any city, town, county, or other political subdivision or Tribal government within the state may apply for an RDGP grant. Grants of up to $300,000 are available per application. Funding for this program comes from interest income from the Resource Indemnity Trust (RIT) Fund and mineral extraction taxes. In FY 2012, the Resource Development Bureau administered 90 reclamation and development grants totaling about $12.8 million.

Table C-5 Water Pollution Control State Revolving Fund Loans

Completed Loans	Loan Amount	Interest Rate	Completed Loans	Loan Amount	Interest Rate
Augusta	$ 502,981	4.00%	Conrad ARRA A	390,700	0.00%
Bearcreek BAN	278,300	2.75%	Conrad ARRA B	359,300	0.75%
Belgrade	1,058,000	4.00%	Conrad	352,780	3.75%
Belgrade II	1,940,000	4.00%	Corvallis Sewer District	351,000	3.00%
Belgrade III	1,339,247	3.75%	Corvallis GAN	235,155	3.00%
Big Sky I	5,513,000	4.00%	Cut Bank I	531,000	4.00%
Big Sky II	417,000	4.00%	Cut Bank II	800,000	4.00%
Big Sky III-A	7,000,000	4.00%	Darby	111,000	4.00%
Big Sky III-B	6,500,000	4.00%	Deer Lodge ARRA A	390,700	0.00%
Big Timber	384,719	4.00%	Deer Lodge ARRA B	359,300	1.75%
Bigfork	1,000,000	4.00%	Deer Lodge	113,138	3.75%
Bigfork County WSD	162,843	2.75%	Denton I	55,000	4.00%
Bigfork County WSD	2,267,480	3.75%	Denton III	139,130	4.00%
Bigfork County WSD	2,025,000	3.75%	Dillon I	1,992,914	4.00%
Bigfork County WSD (Forgiven)	384,000	0.00%	Hot Springs	158,442	4.00%
Bigfork County WSD	816,000	3.75%	Jordan	390,933	2.75%
Bigfork County WSD - C	7,284,000	3.75%	Kalispell I	3,913,000	4.00%
Bigfork County Mayport Harbor	460,000	3.75%	Kalispell II	1,475,860	3.75%
Billings SID	516,000	4.00%	Kalispell	14,470,000	3.75%
Billings	4,515,000	3.75%	Kessler School	185,283	4.00%
Billings-Briarwood	6,542,000	3.75%	Kevin	47,000	3.00%
Billings Line project	4,181,000	3.75%	Kevin II	42,982	2.75%
Billings ARRA A	390,700	0.00%	Laurel	1,376,478	3.75%
Billings ARRA B	359,300	1.75%	Laurel ARRA A	390,700	0.00%
Billings (Forgiven)	384,000	0.00%	Laurel ARRA B	359,300	1.75%
Billings	816,000	3.75%	Laurel-C	779,308	3.75%
Billings-UV project	2,900,000	3.75%	Lavina	121,000	3.00%
Bozeman	400,000	3.75%	Lewis & Clark County	3,043,858	3.75%
Bozeman ARRA A	390,700	0.00%	L&C Co-MT Law Academy ARRA A	390,700	0.00%
Bozeman ARRA B	359,300	1.75%	L&C Co-MT Law Academy ARRA B	359,300	1.75%
Bozeman-WWTP	9,500,000	3.75%	Lewis & Clark Co-Woodlawn	143,000	2.75%
Bozeman-WWTP II	9,573,000	3.75%	Lewistown I	500,000	2.75%
Bozeman D (Forgiven)	384,000	0.00%	Lewistown II	$ 5,400,000	3.75%
Bozeman E	816,000	3.75%	Lewistown ARRA A	197,900	0.00%
Bozeman-Admin Bldg	1,223,000	3.75%	Lewistown ARRA B	161,159	1.75%
Bozeman F	3,903,000	3.75%	Livingston TIF	333,353	3.75%
Bridger Pines WSD (Forgiven)	295,500	0.00%	Livingston SID	158,580	3.75%
Bridger Pines WSD	689,500	3.75%	Livingston ARRA A	390,700	0.00%
Butte-Silver Bow	5,307,390	4.00%	Livingston I	155,000	2.75%
Butte-Silver Bow ARRA A	390,700	0.00%	Livingston ARRA B	359,300	1.75%
Butte Silver Bow ARRA B	359,300	1.75%	Livingston	1,846,745	3.75%
Butte-Silver Bow	240,000	0.00%	Livingston-Digester	419,985	3.75%
Butte-Silver Bow	510,000	3.75%	Lockwood WSD BAN	383,112	2.75%
Butte-Silver Bow	300,000	0.00%	Lockwood WSD ARRA A	390,700	0.00%
Butte-Silver Bow	290,000	3.75%	Lockwood WSD ARRA B	359,300	0.75%
Butte-Silver Bow	456,322	3.75%	Lockwood WSD	3,516,000	3.75%
Cascade I	201,609	3.00%	Lockwood WSD A (Forgiven)	384,000	0.00%
Cascade II	1,217,987	3.00%	Lockwood WSD B	816,000	3.75%
Charlo WSD BAN	45,000	2.75%	Lockwood WSD C	3,078,000	3.75%
Charlo WSD BAN	$ 623,000	2.75%	Lincoln	308,914	4.00%
Choteau - Refin	109,212	4.00%	Manhattan I	636,000	4.00%
Choteau I	500,000	3.00%	Manhattan II	220,000	4.00%
Choteau II	352,595	4.00%	Manhattan III	4,631,000	3.75%
Choteau A (Forgiven)	142,400	0.00%	Melrose WSD BAN	177,092	2.75%
Choteau B	302,600	3.75%	Missoula - County		
Choteau C	99,650	3.75%	Country Crest	281,199	3.75%
Colstrip	300,000	4.00%	ElMar	169,000	2.75%
Colstrip	503,000	4.00%	Golden West	14,000	2.75%
Columbia Falls	2,509,405	4.00%	Linda Vista I	241,000	4.00%
Columbia Falls ARRA A	390,700	0.00%	Linda Vista II	1,943,000	4.00%
Columbia Falls ARRA B	359,300	0.75%	Lolo	649,936	4.00%
Columbia Falls-C	432,178	3.75%	Mullan Road RSID 8474	4,498,121	3.75%
Columbus	1,539,627	3.00%	WYE ARRA A	390,700	0.00%
Conrad	710,510	4.00%	WYE ARRA B	359,300	1.75%
Conrad - Refin	233,000	4.00%	WYE Project - C	3,735,000	3.75%
Conrad BAN	2,727,825	2.75%	WYE-Refinance	3,410,125	3.75%

Table C-5 Water Pollution Control State Revolving Fund Loans (cont'd)

Completed Loans	Loan Amount	Interest Rate
Missoula - City of		
Mullan Trail	31,000	3.75%
Reserve Street SID 526	2,671,000	4.00%
Reserve Street	2,221,000	4.00%
Reserve St Interceptor	459,162	4.00%
Reserve Street/Pineview SID	718,000	4.00%
Reserve St SID 520	2,634,000	4.00%
Msla SID Storm Drain	4,577,000	4.00%
Wapikiya/Bellevue Clarifier I	2,465,000	4.00%
Wapikiya/Bellevue Clarifier II	1,177,000	4.00%
Wapikiya/Bellevue SID 503	324,000	4.00%
Wastewater Plan-A	5,000,000	4.00%
Wastewater Plan-B	3,800,000	4.00%
Wastewater Plan-C	3,688,000	3.75%
39th Street	1,306,984	4.00%
Broadway Birch	1,731,833	3.75%
California Street	502,000	4.00%
Gilbert St SID 533	244,000	3.75%
Mullan Road	1,820,000	4.00%
LincolnWood SID 534	254,000	3.75%
Lincolnwood II SID 536	438,000	3.75%
Lincolnwood II Rev	310,190	3.75%
NW Broadway	943,000	4.00%
DNRC-RDB I	1,500,000	4.00%
DNRC-RDB II	1,750,000	4.00%
DNRC-RDB III	2,000,000	4.00%
DNRC-RDB IV	2,225,000	4.00%
DNRC-RDB V	2,100,000	4.00%
DNRC-RDB VI	2,500,000	4.00%
DNRC-RDB VII	1,300,000	3.75%
DNRC-RDB VIII	1,600,000	3.75%
DNRC-RDB IX	1,725,000	3.75%
DNRC-RDB X	1,800,000	3.75%
DNRC-RDB XI	$ 1,900,000	3.75%
DNRC-RDB XII	2,200,000	3.75%
DNRC-RDB XIII	2,150,000	3.75%
DNRC-RDB XIV	3,500,000	3.75%
DNRC-RDB XV	2,300,000	3.75%
DNRC-RDB XVI	1,500,000	3.75%
Dodson	82,638	2.75%
Drummond	52,920	3.00%
Dutton ARRA A	390,700	0.00%
Dutton ARRA B	359,300	0.75%
Dutton-C	309,005	3.75%
East Helena I	91,000	3.00%
East Helena II-A	1,983,000	3.00%
East Helena II-B	1,408,460	4.00%
East Helena	356,215	2.75%
East Helena ARRA A	167,050	0.00%
East Helena ARRA B	157,300	0.75%
Ennis I	500,000	2.75%
Ennis II	886,000	3.75%
Fairfield ARRA A	333,900	0.00%
Fairfield ARRA B	307,100	0.75%
Flathead County		
Bigfork	424,000	3.00%
Evergreen I	3,600,000	3.50%
Evergreen II	700,000	3.50%
Forsyth	1,302,534	4.00%
Fort Benton II	1,177,000	4.00%
Fort Benton II	771,645	3.75%
Froid	60,846	2.75%
Gallatin Co/Hebgen Lake	4,076,371	4.00%
Gallatin Co/Logan Landfill	2,242,000	3.75%
Gardiner-Park Co WSD	92,160	0.00%
Gardiner-Park Co WSD	195,840	3.75%
Gardiner-Park Co WSD	46,793	2.75%

Completed Loans	Loan Amount	Interest Rate
Geraldine	113,000	4.00%
Gildford WSD A (Forgiven)	134,400	0.00%
Gildford WSD B	284,000	3.75%
Glasgow I	402,000	4.00%
Glasgow II	1,048,000	4.00%
Glasgow III	778,470	4.00%
Glasgow GAN	251,740	3.00%
Glendive ARRA A	31,800	0.00%
Glendive ARRA B	29,200	1.75%
Glendive I	236,000	4.00%
Glendive II	376,000	4.00%
Glendive III	372,922	3.75%
Glendive A (Forgiven)	96,000	0.00%
Glendive B	199,566	3.75%
Great Falls	11,295,267	4.00%
Great Falls Storm Sewer	4,390,491	3.75%
Great Falls ARRA A	390,700	0.00%
Great Falls ARRA B	309,816	1.75%
Great Falls WTP Design	3,800,000	3.00%
Hamilton ARRA A	390,700	0.00%
Hamilton ARRA B	359,300	1.75%
Hamilton-C	717,000	3.75%
Hardin	2,026,390	3.75%
Hardin ARRA A	390,700	0.00%
Hardin ARRA B	359,300	1.75%
Hardin Landfill	1,650,000	3.75%
Hardin	625,000	3.75%
Harlowton	777,073	3.00%
Harrison W & S	319,472	3.00%
Havre I	2,160,770	4.00%
Havre II	500,000	2.75%
Havre III	878,519	3.75%
Havre IV	1,699,000	3.75%
Helena	$ 9,320,000	4.00%
Helena ARRA A	390,700	0.00%
Helena ARRA B	359,300	1.75%
Hinsdale W & S	85,402	2.75%
Pineview SID 525	658,000	4.00%
Rattlesnake ARRA A - RSID	29,688	0.00%
Rattlesnake ARRA A - REV	361,012	0.00%
Rattlesnake ARRA B	359,300	1.75%
Rattlesnake - Lolo St	31,000	3.75%
Rattlesnake - Lolo St	63,485	3.75%
Rattlesnake SID	1,608,102	3.75%
Rattlesnake-Revenue	572,098	3.75%
Rattlesnake	304,000	4.00%
Nashua	193,769	3.00%
Northern Montana Refuse District	1,035,315	4.00%
Park City County W & S	692,000	3.00%
Park County I	378,000	4.00%
Park County II	83,000	4.00%
Plains ARRA A	261,500	0.00%
Plains ARRA B	181,790	0.75%
Red Lodge	390,000	4.00%
Red Lodge BAN	3,876,731	3.00%
Red Lodge ARRA A	266,300	0.00%
Red Lodge ARRA B	225,743	0.75%
Richey	57,041	2.75%
River Rock W & S	3,100,000	4.00%
Ronan	619,905	4.00%
Ronan BAN	75,000	2.75%
Ronan	285,362	3.75%
Ronan ARRA A	153,600	0.00%
Ronan ARRA B	141,200	0.75%
Ronan	50,000	3.75%
Shelby	481,000	4.00%
Shelby - Refin	453,000	4.00%

Table C-5 Water Pollution Control State Revolving Fund Loans (cont'd)

Completed Loans	Loan Amount	Interest Rate	Completed Loans	Loan Amount	Interest Rate
Shelby ARRA A	390,700	0.00%	Victor W & S	300,000	4.00%
Shelby ARRA B	359,300	1.75%	Virginia City	500,000	2.75%
Shelby-C	670,000	3.75%	Virginia City	294,343	3.75%
Scobey I	500,000	2.75%	Virginia City ARRA A	202,200	0.00%
Scobey II	755,511	3.75%	Virginia City ARRA B	173,637	0.75%
St. Regis WSD ARRA A	$ 53,700	0.00%	Whitefish I	200,000	3.00%
St. Regis WSD ARRA B	49,400	1.75%	Whitefish II	500,000	2.75%
St. Marie North Valley WSD	150,000	4.00%	Whitefish III	1,711,000	3.75%
Superior I	82,000	4.00%	Whitefish ARRA A	66,700	0.00%
Superior II	234,885	2.75%	Whitefish ARRA B	48,211	0.75%
Sweet Grass W & S I	80,000	3.00%	Whitefish	160,000	0.00%
Sweet Grass W & S II	123,231	3.00%	Whitefish	340,000	0.75%
Three forks	639,591	3.75%	Whitefish	386,000	3.75%
Townsend	1,071,000	4.00%	Whitewater WSD	120,000	3.00%
Townsend ARRA A	390,700	0.00%	Winifred ARRA A	291,400	0.00%
Townsend ARRA B	358,829	1.75%	Winifred ARRA B	268,000	0.75%
Troy	1,817,281	3.00%	Wisdom WSD ARRA A	170,200	0.00%
Upper Lower WSD	140,000	3.75%	Wisdom WSD ARRA B	112,680	0.75%
Valier I	200,000	4.00%	Wolf Point	453,000	4.00%
Valier II	19,008	4.00%	Worden-Ballantine WSD	260,000	4.00%
Valier III	600,000	3.75%			
Vaughn-Cascade WSD	248,128	4.00%	**Grand Total Loans Closed**	**$ 354,648,703**	

Table C-6 Drinking Water Revolving Fund Loans

Completed Loans	Loan Amount	Interest Rate	Completed Loans	Loan Amount	Interest Rate
Belgrade ARRA A	$ 416,300	0.00%	Chester ARRA B	199,400	0.75%
Belgrade ARRA B	333,700	0.75%	Choteau	332,000	3.00%
Belgrade A	500,000	0.00%	Colstrip I	563,000	4.00%
Belgrade B	2,718,000	3.75%	Colstrip II	829,000	4.00%
Belgrade C	161,300	3.75%	Columbia Falls I	907,000	4.00%
Big Sandy	349,377	2.75%	Columbia Falls II	502,000	3.75%
Big Sky I	534,000	4.00%	Columbus	110,000	3.75%
Big Sky II	1,966,000	4.00%	Columbus ARRA A	416,300	0.00%
Big Sky III	5,000,000	3.75%	Columbus ARRA B	333,700	1.75%
Billings SID	818,000	4.00%	Conrad I	650,000	4.00%
Billings	17,300,000	3.75%	Conrad II	1,543,172	4.00%
Billings ARRA A	416,300	0.00%	Cut Bank I	283,000	4.00%
Billings ARRA B	333,700	1.75%	Cut Bank II	576,000	4.00%
Billings C	2,750,000	3.75%	Cut Bank ARRA A	416,300	0.00%
Billilngs Zone 4 Tank	7,412,000	3.75%	Cut Bank ARRA B	333,700	0.75%
Billings A	500,000	0.00%	Cut Bank A	70,000	0.00%
Billings B	2,800,000	3.75%	Cut Bank B	70,000	3.75%
Billings Heights A	500,000	0.00%	Dry Prairie Rural Wtr Auth	313,000	2.75%
Billings Heights B	538,000	3.75%	Dry Prairie II	507,000	2.75%
Black Eagle ARRA A	124,900	0.00%	Dry Prairie III	368,000	2.75%
Black Eagle ARRA B	100,100	0.75%	Dry Prairie IV-A	500,000	0.00%
Boulder	1,294,000	4.00%	Dry Prairie IV-B	759,000	3.75%
Bozeman SID	94,000	3.75%	East Helena I	228,000	3.00%
Bozeman A	10,000,000	3.75%	East Helena II	3,234,000	3.00%
Broadview	203,000	4.00%	Ekalaka Refinace	290,800	2.75%
Brockton	44,998	4.00%	Ekalaka	232,747	2.75%
Butte ARRA A	416,300	0.00%	Elk Meadows Ranchettes	200,000	4.00%
Butte ARRA B	299,230	1.75%	Elk Meadows ARRA A	416,300	0.00%
Butte A	500,000	0.00%	Elk Meadows ARRA B	333,700	0.75%
Butte B	4,360,000	3.75%	Em-Kayan WSD	191,000	3.75%
Cascade	129,998	3.00%	Ennis I	59,701	4.00%
Charlo WSD	85,000	3.75%	Ennis II	500,000	2.75%
Chester ARRA A	248,600	0.00%	Essex WSD ARRA A	198,300	0.00%

Table C-6
Drinking Water Revolving Fund Loans (cont'd)

Completed Loans	Loan Amount	Interest Rate	Completed Loans	Loan Amount	Interest Rate
Essex WSD ARRA B	158,946	0.75%	LaCasa Grande WSD I	150,000	4.00%
Eureka	$ 619,000	4.00%	LaCasa Grande WSD II	500,000	2.75%
Eureka interim financing	1,000,000	2.75%	Lakeside	400,000	3.00%
Fort Benton ARRA A	350,200	0.00%	Laurel I	5,250,000	4.00%
Fort Benton ARRA B	279,819	1.75%	Laurel II	2,541,000	4.00%
Fort Peck WSD	1,520,000	4.00%	Laurel III-A	$ 500,000	2.75%
Gardiner-Park County WSD - A	161,504	3.00%	Laurel III-A	190,000	3.75%
Gardiner Park County WSD - B	330,000	3.00%	Laurel IV-A	500,000	2.75%
Gardiner Park County WSD - C	267,000	4.00%	Laurel IV-B	129,288	3.75%
Gardiner-Park County WSD II	463,784	2.75%	Laurel Refinance	518,500	2.75%
Gardiner-Park County WSD III	125,000	2.75%	Laurel V-A	188,000	0.00%
Geraldine	129,000	3.00%	Laurel V-B	188,000	3.75%
Glendive	1,565,000	4.00%	Lewis & Clark County - Woodlawn	319,516	2.75%
Glendive ARRA A	198,100	0.00%	Lewis & Clark County - Senior ARRA A	25,500	0.00%
Glendive ARRA B	158,900	1.75%	Lewis & Clark County - Senior ARRA B	20,500	0.75%
Glendive	150,000	0.00%	Lewistown	3,549,000	3.75%
Glendive	150,000	3.75%	Livingston I	155,000	2.75%
Goodan Keil WD	474,999	2.75%	Livingston Rev	700,000	3.75%
Gore Hill A	265,000	0.00%	Livingston Rev	200,000	3.75%
Gore Hill B	265,000	3.75%	Livingston TIF	676,472	3.75%
Great Falls	3,000,000	4.00%	Livingston SID	322,088	3.75%
Great Falls	4,010,000	3.75%	Lockwood WSD I	1,700,000	4.00%
Great Falls ARRA A	416,300	0.00%	Lockwood WSD II - A	500,000	2.75%
Great Falls ARRA B	333,700	1.75%	Lockwood WSD II - B	500,000	3.75%
Greenacres A	208,000	0.00%	Lockwood WSD III - A	500,000	2.75%
Greenacres B	208,000	3.75%	Lockwood WSD III - B	600,000	3.75%
Hamilton I	220,000	4.00%	Lockwood WSD IV-A	436,500	0.00%
Hamilton II - A	500,000	2.75%	Lockwood WSD IV-B	436,500	3.75%
Hamilton II - B	318,000	3.75%	Manhattan ARRA A	127,700	0.00%
Hamilton II - C	380,000	3.75%	Manhattan ARRA B	102,300	0.75%
Hamilton	170,000	3.75%	Manhattan	194,000	2.75%
Hardin	453,900	3.75%	Miles City	1,007,697	2.75%
Harlem I-A	500,000	2.75%	Miles City - Carbon Hill	500,000	2.75%
Harlem I-B	579,638	3.75%	Miles City - NE waterlines	500,000	2.75%
Harlowton A	437,000	0.00%	Miles City - Carbon Hill	2,200,000	3.75%
Harlowton B	437,000	3.75%	Miles City - NE waterlines	2,200,000	2.75%
Havre I	600,000	4.00%	Miles City ARRA A	416,300	0.00%
Havre II	8,401,000	4.00%	Miles City ARRA B	333,700	0.75%
Havre III - A	500,000	2.75%	Missoula County Fair	206,194	4.00%
Havre III - B	203,700	3.75%	Missoula/Sunset West	291,000	4.00%
Havre ARRA A	194,300	0.00%	Missoula County - Lorraine South	142,000	3.75%
Havre ARRA B	155,700	0.75%	Missoula County L&C ARRA A	317,700	0.00%
Helena I	1,250,000	4.00%	Missoula County L&C ARRA B	165,000	0.75%
Helena II	2,850,000	3.75%	Missoula County L&C ARRA C	4,979	0.75%
Helena III	2,750,000	3.75%	Mountain Water Company ARRA A	416,300	0.00%
Helena ARRA A	416,300	0.00%	Mountain Water Company ARRA B	333,700	1.75%
Helena ARRA B	333,700	1.75%	Neihart	107,617	2.75%
Helena	1,325,000	3.75%	Pablo ARRA A	416,300	0.00%
Highwood WSD	75,000	3.00%	Pablo ARRA B	333,700	0.75%
Hill County	723,998	3.75%	Pablo C	152,121	3.75%
Homestead Acres WSD ARRA A	218,700	0.00%	Panoramic Mtn River Hgts WD	120,000	3.75%
Homestead Acres WSD ARRA B	175,297	3.75%	Philipsburg	238,322	3.00%
Jette Meadows WSD	44,477	2.75%	Phillips Co Green Mdws WSD	63,727	2.75%
Jette Meadows WSD	300,000	3.75%	Phillips Co Green Mdws WSD (GAN)	100,000	2.75%
Jette Meadows WSD ARRA A	416,300	0.00%	Plains	239,628	3.75%
Jette Meadows WSD ARRA B	333,700	0.75%	Plentywood	577,000	4.00%
Jette Meadows WSD C	325,000	3.75%	Plentywood II	500,000	2.75%
Judith Gap	112,000	2.75%	Plentywood II - B	500,000	3.75%
Kalispell	761,000	3.75%	Polson ARRA A	416,300	0.00%
Kalispell - refinance	1,283,159	3.75%	Polson ARRA B	333,700	0.75%
Kalispell II	1,500,000	3.75%	Power-Teton WSD I	400,000	2.75%
Kevin ARRA A	377,400	0.00%	Power-Teton WSD II	375,000	2.75%
Kevin ARRA B	302,600	0.75%	Richey	45,000	2.75%

Table C-6
Drinking Water Revolving Fund Loans (cont'd)

Proposed Loans	Loan	Interest Rate	Proposed Loans	Loan	Interest Rate
River Rock WSD	2,100,000	4.00%	Twin Bridges	286,515	4.00%
Saco	335,005	2.75%	Troy ARRA A	277,500	0.00%
Scobey A	162,000	0.00%	Troy ARRA B	222,500	0.75%
Scobey B	162,000	3.75%	University of Montana	416,300	0.00%
Seeley Lake	1,340,000	3.00%	University of Montana ARRA B	333,700	1.75%
Seeley Lake ARRA A	$ 416,300	0.00%	Upper Lower River Rd WSD	500,000	2.75%
Seeley Lake ARRA B	333,700	0.75%	Upper/Lower River Rd WSD	195,000	3.75%
Seeley Lake C	2,695,000	3.75%	Upper/Lower River Rd WSD BAN	234,479	2.75%
Shelby I	866,000	4.00%	Upper/Lower River Rd WSD BAN II	606,536	2.75%
Shelby II	677,000	4.00%	Upper/Lower River Rd WSD II	365,000	2.75%
Shelby III	700,000	3.75%	Upper Lower River Rd WSD ARRA A	277,500	0.00%
Shelby IV	709,000	3.75%	Upper Lower River Rd WSD ARRA B	222,500	0.75%
Shelby IV-A	500,000	2.75%	Upper/Lower River Rd WSD BAN III	385,000	2.75%
Shelby IV-B	150,000	3.75%	Virginia City	66,000	4.00%
Shelby ARRA-A	416,300	0.00%	Virginia City ARRA A	238,700	0.00%
Shelby ARRA-B	333,700	0.75%	Virginia City ARRA B	187,049	0.75%
Shelby C	1,247,000	3.75%	Virginia City ARRA II-A	26,600	0.00%
Sheridan	265,200	2.75%	Virginia City ARRA II-B	10,850	0.75%
Sheridan BAN	167,622	2.75%	White Sulphur Springs BAN	175,000	2.75%
Sheridan II	359,213	2.75%	White Sulphur Springs BAN	1,898,000	2.75%
Spring Meadows Co WD	309,000	2.75%	Whitefish I	400,000	4.00%
Sunny Meadows	180,000	2.75%	Whitefish II	5,839,000	4.00%
Superior I	500,000	2.75%	Whitefish III	895,835	3.75%
Superior II	1,229,105	3.75%	Whitefish IV	900,000	3.75%
Superior ARRA A	165,400	0.00%	Whitefish ARRA A	149,900	0.00%
Superior ARRA B	132,600	0.75%	Whitefish ARRA B	120,100	0.75%
Thompson Falls I	500,000	2.75%	Wilderness Plateau WSD ARRA A	146,000	0.00%
Thompson Falls II	897,596	3.75%	Wilderness Plateau WSD ARRA B	117,000	0.75%
Thompson Falls	128,694	2.75%	Wolf Point	730,000	3.75%
Three Forks ARRA A	94,400	0.00%	Worden-Ballantine WSD I	500,000	2.75%
Three Forks ARRA B	75,600	1.75%	Worden-Ballantine WSD II	368,000	3.75%
Three Forks I	336,000	3.75%	Yellowstone County RSID	373,000	3.75%
Three Forks BAN	22,570	2.75%			
Three Forks III	268,000	3.75%	**Subtotal**	**198,754,462**	

The 2011 legislature authorized 23 projects for funding, as shown in Table C-7, p.20. Sixteen of these projects were contracted in FY 2012, and CARDD anticipates that the remaining projects will be contracted during FY 2013. Figue C-2 demonstrates the types of projects funded. In May 2012, RDGP received 23 grant applications requesting $6.1 million. DNRC is currently evaluating these applications for funding recommendations.

An example of a project grant funded by the 2011 legislature is a pentachlorophenol (PCP) waste cleanup in the Fergus County shop area near Lewistown. The RDGP grant provided $300,000 of the $1 million cost to Fergus County to remove and dispose of contaminated soil. The project work plan was approved by the Montana Department of Environmental Quality (DEQ). Use of the RDG program enabled the county to complete the cleanup quickly, eliminate risk of groundwater contamination, reduce liability to a local government, and reduce workload for the DEQ.

Figure C-2
Allocation of Reclamation and Development Grant Projects Approved by the 2011 Legislature

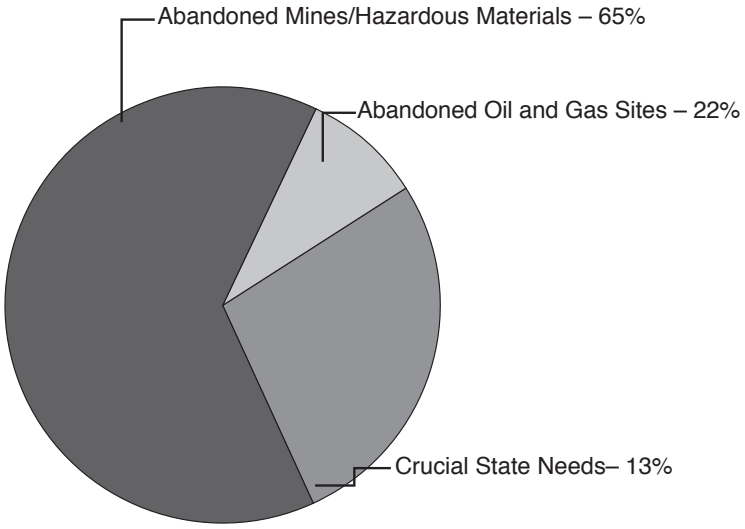


Table C-7
Reclamation and Development Grants approved by the 2011 Legislature in order of their ranking

Applicant	Project Title	Amount
Montana BOGC	Eastern District Orphaned Well Plug and Abandonment and Site Restoration	$ 300,000
Montana BOGC	North/Eastern District Orphaned Well Plug and Abandonment and Site Restoration	300,000
Ruby Valley CD	Alder Gulch - Phase I Improvements	300,000
Montana DEQ	Forest Rose Mine and Mill Site Reclamation	300,000
Montana DEQ	Lily/Orphan Boy Mine Reclamation	300,000
Sanders County	Managing AIS Plant Species Protect Montana's Water Resources	300,000
Montana FWP	Big Spring Creek PCB Remediation	300,000
Montana DNRC	St. Mary and Milk River Basins Water Management	250,000
Montana DEQ	Sand Coulee Public Water Supply Restoration	300,000
Pondera County	Pondera County Oil & Gas Well Plug & Abandon	100,000
Teton County	Teton County Oil and Gas Well Plug and Abandon	60,000
Fort Peck Tribes	Reclamation of the Philip Red Eagle 2-25 Salt Water Disposal Well	254,782
Montana BOGC	Southern District Orphaned Lease Battery Site Restoration	200,000
Shelby, City of	Reclamation of Shelby Refinery	300,000
Missoula County	Ninemile Creek Mining District - Phase II	228,345
Montana DEQ	Zortman and Landusky Mines Source Control Prioritization Evaluation	300,000
Missoula, City of	Missoula Sawmill Site Wood Waste Reclamation	300,000
Butte-Silver Bow	Butte Mining District: Reclamation and Protection Phase III	300,000
Fergus County	Pentachlorophenol Cleanup	300,000
Meagher County CD	Thomas Creek Placer Surface Flow Enhancement & Stream Stabilization	162,797
Montana DEQ	Beal Mountain Mine Pit Run On Controls and Pond Removal	300,000
Crow Tribe	Little Bighorn River Restoration	300,000
Montana DEQ	Landusky Mine Clarifier Construction	300,000
Total		**$ 10,885,924**

In FY 2012, the RDG program initiated a new grants program to control aquatic invasive species (AIS). This program committed $400,000 toward surveys of Montana's surface waters for the presence of AIS and to address outbreaks of Eurasion watermilfoil. In FY 2012, DNRC funded 19 aquatic invasive species surveys and control projects and provided technical support for local control and education efforts. Examples of AIS projects include grants to the Flathead County Weed District and the Flathead Lakers for emergency removal of Eurasion watermilfoil in Beaver Lake, a subsequent lake survey, and further weed removal action the following summer of FY 2013.

The 2011 legislature also authorized funding for project planning grants. Twenty local government entities received up to $50,000 each to retain services of a consulting or engineering firm to prepare for reclamation of mine sites, voluntary cleanup sites, Brownfields sites, and address damage from the 2011 floods.

Renewable Resource Grant and Loan Program

The Montana Legislature established what is now called the Renewable Resource Grant and Loan (RRGL) Program in 1993 by combining the Water Development Program and the Renewable Resource Development Program. Funding is available to research, plan, design, construct or rehabilitate projects that conserve, develop, manage, and/or preserve Montana's renewable resources. The RRGL program funds a variety of natural resource projects including irrigation infrastructure rehabilitation, improvements to municipal drinking water and public wastewater facilities, groundwater studies, water and soil conservation, renewable energy, and stream restoration.

Renewable Resource grants are funded by interest income on the Resource Indemnity Trust fund and mineral extraction taxes. The RRGL loan program is funded through issuance of general obligation and coal severance tax bonds.

Aquatic Invasive Species diver and dredge. Photo by Alicia Stickney.

Public Project and Planning Grants

The 2011 legislature authorized $6,260,000 in funding for RRGL project grants (Table C-8). Forty-three of these projects began in FY 2012 and the remaining projects will be contracted during FY 2013. Figure 6 summarizes the types of projects funded. In May 2012, CARDD received 96 applications for renewable resource project grants for a total requested amount of $9.48 million. DNRC is currently evaluating these applications and will prepare recommendations for the 2013 legislature. Up to $100,000 is available per project grant.

An example of a current RRGL project grant is Flathead County's "Big Fork Storm Water System Improvements". The community of Big Fork identified storm water discharge as a significant contributor to pollution of Flathead Lake. Flathead County and the community of Big Fork conducted an extensive alternatives analysis and developed a project design. The community used the RRGL grant to supplement $750,000 in locally-raised funds to upgrade Big Fork's storm water collection system and build treatment units that will filter contaminants before storm water is discharged to Big Fork Bay and the Swan River.

In FY 2012, the bureau administered 135 project and planning RRGL grants and $3,803,185 was disbursed. (Table 9) lists RRGL projects in the order in which they were approved and ranked by the 2011 Montana Legislature; the allocation of funds is shown in Figure 6.

The RRGL program also provides up to $20,000 to governmental entities for project planning. These grants typically fund feasibility studies, preliminary engineering reports, or other approved planning activities. Applications must explain how the project would contribute to the conservation, management, development, or preservation of renewable resources in Montana. In FY 2012, 87 planning grants were contracted for a total of $815,000.

Emergency projects are typically associated with an unanticipated system failure and not the result of normally expected use and deterioration such as dam failures, failure of irrigation structures during irrigation season, and failed wastewater-pumping stations. All other reasonable sources of funding must be identified and exhausted before emergency funding is recommended. The 2011 legislature appropriated $100,000 for emergency grants for the 2013 biennium. Of the emergency grant appropriation, $55,000 is available for the remainder of the 2013 biennium. The department also has statutory authority to make loans to public entities for emergency projects.

An example of an emergency project is a canal embankment failure that occurred in early July, 2011 along a section of the Ward Canal approximately nine miles south of Hamilton. The canal was drained over the July 4th weekend. Based on the recommendations of a consultant civil engineer following a site investigation, a contractor was hired to provide groundwater drainage, reconstruct the embankment, and reline the damaged section of canal. Ward Irrigation District was awarded a $10,000 RRGL emergency grant. Total cost of the project was approximately $17,000.

Figure C-3
Allocation of Funds for Renewable Resource Grant and Loan Projects Approved by the 2011 Legislature

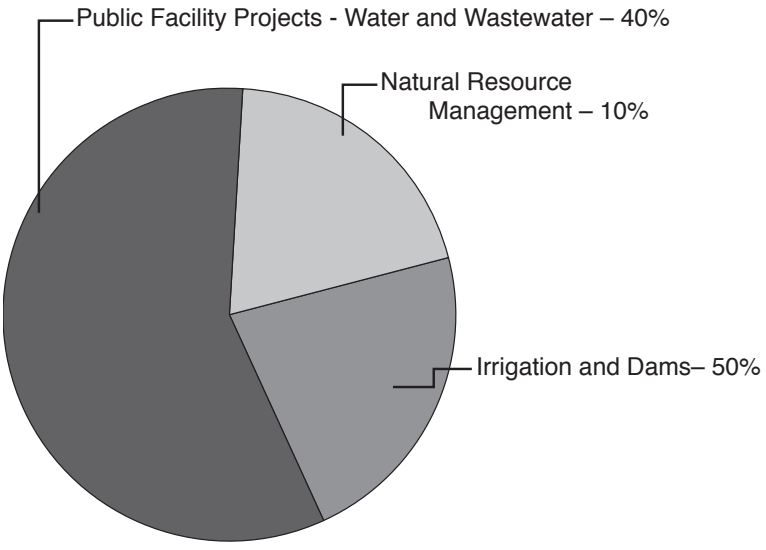


Table C-8
Renewable Resource Grant and Loan Projects
approved by the 2011 Legislature as ranked and funded

Applicant	Project Name	Grant Amount
DNRC-Water Resources Division	Hydropower Feasibility Study	$ 100,000
Sheridan, Town of	Wastewater System Improvements	$100,000
Deer Lodge, City of	Wastewater System Improvements	$100,000
Feergus Conservation District	Big Spring Creek Stream Restoration at the Machler Conservation Easement	$100,000
DNRC-Trust Land Management Division	Smith Lake Dam Rehabilitation	$100,000
Culbertson, Town of	Wastewater System Improvements	$100,000
Upper Lower River Road WSD	Water and Wastewater System Improvements	$100,000
Beaverhead CD	Poindexter Slough Fishery Enhancement	$100,000
Pondera CD	Pondera County C Canal	$100,000
Buffalo Rapids Irrigation District 1	Irrigation System Improvementss- Lateral 26.4	$100,000
Pondera CD	Irrigation Infrastructure Improvements- Pondera Wasteway Rehab and Water Quality Improvement	$100,000
Flathead County	Big Fork Stormwater Improvements	$100,000
Hebgen Lake Estates County WSD	Wastewater System Improvements	$100,000
Harlem, City of	Wastewater System Improvements	$100,000
Polson, City of	Water System Improvements	$100,000
Amsterdam-Churchill Sewer District No 307	Wastewater System Improvements	$100,000
Stanford, Town of	Water System Improvements	$100,000
MT FWP	Chadbourn Diversion Dam Repair	$99,500
Helena Valley Irrigation District	Irrigation System Improvements - Pump 2 Rehab	$100,000
Belt, Town of	Water System Improvements	$100,000
Sun Prairie Village County WSD	Water System Improvements	$100,000
Fort Belknap Indian Community	Water Conservation Project	$100,000
Sweet Grass County CD	Big Timber Creek Channel Stabilization Project	$99,998
Sidney Water Users Irrigation District	Increasing Irrigation Efficienty:District 1 and 2 Phase 3	$100,000
Sidney Water Users Irrigation District	Increasing Irrigation Efficienty:District 5 Lateral 2	$100,000
Clinton Irrigation District	Irrigation System Improvements Schoolhouse Pipeline	$100,000
East Bench Irrigation District	Main Canal Check Structure Rehab	$100,000
Lower Musselshell CD	Delphia Melstone Irrigation Structure Rehab/Canal Lining	$100,000
Madison CD	South Meadown Creek Water Efficienty	$100,000
Confederated Salish & Kootenai Tribes	Jocko Upper S Canal Lining	$100,000
Malta Irrigation District	Dodson North Canal Siphons Replacement	$100,000
Roberts Carbon County WSD	Water and Wastewater System Improvements	$100,000
Chippewa Cree Tribe	Dry Fork Farms Irrigation Enhancement	$97,429
Flathead Joint Board of Control	Jocko Upper J Canal Diversion Structure	$100,000
Lockwood Irrigation District	Irrigation System Improvemebnts - Intake Canal Spillway Replacement	$100,000
Glendive, City of	Floodplain Feasibility Study	$100,000
Fort Shaw Irrigation District	Irrigation System Iprovements	$100,000

(continued on page 23)

Table C-8
Renewable Resource Grant and Loan Projects approved by the 2011 Legislature as ranked and funded (cont'd)

Applicant	Project Name	Grant Amount
DNRC-Water Resources Division	East Fork Rock Creek Diversion and Fish Screen	$100,000
Daly Ditches Irrigation District	Irrigation Improvements - Hedge Canal	$100,000
Gallatin Gateway County WSD	Wastewater System Improvements	$100,000
Greenfields Irrigation District	Irrigation System Improvements - Big Coulee	$100,000
Park CD	Irrigation System Improvements - Park Branch Paradise Canal	$100,000
Huntly Project Irrigation District	Irrigation System Improvements - Lower Canal Seepage Lining	$100,000
Fairfield, Town of	Water System Improvements	$100,000
Fort Peck Tribes	Irrigation System Improvements-Lateral L-2M Rehab	$100,000
Hardin, City of	Water System Improvements	$100,000
Bitterroot Irrigatin District	Irrigation System Improvements, Siphon 1 Phase 2	$100,000
North Havre County Water District	Water System Improvements	$100,000
Roundup, City of	Watershed Sustainable Irrigation Management Program	$60,000
DNRC-Water Resources Division	DNRC-Clark Fork River Basin Taskforce ----------amended to increase from $32,000	$63,000
Green Mountain CD	Tuscor Creek Restoration Project	$84,778
Lewistown, City of	East Fork Dam Repain	$100,000
Crow Tribe of Indians	Water System Improvements-Phase 4A	$100,000
Hill County Water District	Water System Improvements	$100,000
Roundup, City of	Water System Improvements	$100,000
Kevin, Town of	Water System Improvements Phase 3	$100,000
Whitefish, City of	Haskill Basin Water Conservation and Preservation	$100,000
Ravalli County	Phase 3 Lidar Mapping for Flood Hazard Phase 3	$75,000
Lockwood WSD	Wastewater	$100,000
Teton CD	Eureka Reservoir Improvements	$100,000
East Helena, City of	Wastewater System Improvements	$100,000
Missoula County	County Lidar Mapping	$50,000
DNRC-Water Resources Division	MT DNRC Irrigation System Improvments-Martinsdale Supply Canal Rehab	$98,688
Ravalli County Environmental Health	Bitterroot Valley Septic Systems Impact Model Phase 2	$73,745
	Total	$6,202,138

Table 10
Public Loans

Applicant	Balance Due	Applicant	Balance Due
Antelope Co. WSD	$ 26,016	East Bench Irrigation District	$ 195,706
Beaverhead Co./Red Rock WSD	1,041,224	Fairfield, Town of	103,017
Bitter Root Irrigation District	223,779	Forsyth, City of	78,610
Bitter Root Irrigation District	457,446	Flathead County	462,191
Bridger Pines County W&SD	1,279,613	Fort Benton, City of	207,750
Broadwater Power Project	21,450,000	Huntley Irrigation District 1	440,545
Buffalo Rapids Irrigation District	585,621	Huntley Irrigation District 2	153,754
Daly Ditches Irrigation District	206,189	Huntley Irrigation District 3	38,727
Daly Ditches Irrigation District	323,890	Huntley Irrigation District 4	105,818
DNRC/State Water Projects Bureau		Hysham, Town of	70,748
Ackley Lake Dam Rehab.	153,339	Lockwood WSD	1,018,155
Bair Dam	538,347	Lower Willow Creek Irrigation District	23,366
Broadwater-Missouri Pipe Span	162,267	Malta Irrigation District	1,296,556
Deadman's Basin (Barber)	213,672	Manhattan, Town of	1,172,131
Deadman's Basin (Canal)	40,903	Mill Creek WSD	289,872
Deadman's Basin (Outlet)	360,020	Mill Creek Irrigation District	475,964
East Fork Rock Creek Dam	250,000	Sun Prairie WSD	24,312
East Fork Siphon	184,715	Tin Cup WD	93,018
Martinsdale Reservoir	74,268	Tongue River	7,533,333
Nevada Creek Dam Rehab.	298,582		
North Fork of the Smith River	316,090		
Petrolia Dam	126,615		
Ruby River WUA	1,869,627		
Ruby River WUA	3,606,429		
		Total	**$ 47,572,225**

Public Loans

This program makes loans to governmental entities for renewable resource projects. The program was developed in 1981 by the Montana Legislature, and $250 million in coal tax bonding authority was granted to the state. In FY 2012, 43 public loans with a balance of approximately $47.6 million were outstanding. The public loans are listed in Table 10. The legislature has approved $3.9 million in loans for which funds have not yet been drawn.

Many of the early loans in the RRGL public loan program were for municipal water and wastewater projects. However, since creation of the Water Pollution Control and Drinking Water State Revolving Fund (SRF) Loan programs, municipalities borrow money at 3.75% or less through the SRF programs. This has increased capacity in the public loan program for other types of projects. The number of irrigation loans the program has funded has steadily increased, which reflects the need for money to fund rehabilitation or replacement of aging dams, canals, and other irrigation infrastructure. A lack of federal funding for rehabilitation of irrigation infrastructure reinforces the importance of the program. The public loan program also provides a safety net for municipal projects such as solid waste or other public facility projects that do not qualify for SRF funding.

Private Grants and Loans

The RRGL program also provides financial assistance to individuals, associations, partnerships, and corporations (both for-profit and nonprofit) through private grants and loans. By law, private grants for a single project may not exceed 25% of the total estimated cost. Half of the funds are set aside to assist small, privately owned water systems. Owners of small systems have difficulty in meeting Safe Drinking Water Act regulations, but must meet the same requirements that municipal water systems face. The average size of a grant is $1,896; the grant must be matched on a 3-to-1 basis. In FY 2012, DNRC awarded six grants totaling $13,115.

Loans are available to private individuals for up to $400,000 and to organizations such as water user associations and ditch companies for up to $3 million. Private loans to individuals must be secured with real property. Organizations such as an irrigation water users association, typically secure loans with revenue produced by the system. Irrigation system improvements–for example, conversion from flood irrigation to sprinkler

Center Pivot Private Loan Project. Photo by Larry Bloxsom.

Irrigation Development Grants Ditch Workshop Photo by Alice Stanley.

irrigation–are the most common type of project funded through private loans.

To finance loans, DNRC issues general obligation renewable resource bonds up to a total outstanding balance of $30 million. The current outstanding balance on the loans is $17.2 million. Currently, CARDD administers 225 loans.

In FY 2012, the private loan program sold $1.5 million in taxable general obligation bonds. A typical RRGL private project funded in FY2012 is a loan for $200,000 for the installation of a 1,605 foot gravity powered center pivot sprinkler to irrigate 215 acres near Two Dot. The new sprinkler replaced a flood irrigation system resulting in reduced labor costs and reduced volume of water withdrawn from the water source.

Irrigation Development Grant Program

The Irrigation Development Grant Program (IDG) was originated by the 1999 legislature to provide financial and technical assistance for irrigation projects to increase irrigated acreage, increase production, add high-value crops and improve existing irrigation projects in Montana.

Through the IDG Program, DNRC awards $300,000 per biennium in grants to both private and public applicants for up to $15,000 per project. Typically, grants are used for feasibility studies to investigate new projects, water conservation efforts, system management tools, and planning infrastructure improvements. DNRC contracted $248,122 to 34 irrigation development projects in FY 2012. The balance will be contracted in FY 2013.

Recently funded projects include development of a geographic information tracking system for the Helena Valley Irrigation District, irrigation system installation at Jackson's Community Garden near Twin Bridges, and post-flood technical assistance for the Delphia-Melstone Water Users Association.

Conservation District Water Reservations

In 1978, the Board of Natural Resources and Conservation granted water reservations to 14 CDs in the Yellowstone River Basin. Nine CDs were granted reservations in the Upper Missouri River Basin in 1992, and 11 CDs were given reservations in the Lower and Little Missouri River basins in 1994. Some CDs have reservations in more than one basin. The bureau provides legal, technical, and programmatic assistance to CDs in the administration of these water reservations.

Conservation districts continue to make progress toward developing their water reservations. In FY2012, CDs in the Yellowstone River Basin allocated 3,768 acre-feet of water for 8 new irrigation projects. During the same period, CDs in the Missouri River Basin allocated 1,702 acre-feet to 4 new projects. Since the program began, CDs have allocated 118,493 acre-feet of water for 279 irrigation projects in the Missouri and Yellowstone River basins.

Regional Water Coordination

Montana developed a regional water trust fund using coal severance tax dollars for Montana's regional drinking water supply systems. The DNRC coordinates development of four regional water systems (Figure 7). Two systems, the Fort Peck - Dry Prairie and the Rocky Boys - North Central, work effectively as partnerships between Tribal governments and non-Tribal communities. These systems have been authorized by Congress and receive federal funding. The other two systems are still in the planning stages. When completed, each regional water system will provide clean and plentiful drinking water to a large number of communities that otherwise rely on bottled or substandard drinking water. Regional water systems will improve the health of the citizens and economic vitality of the communities they serve. The

Wambdi Wahachanka Water Treatment Facility Dedication. Photo by Alice Stanley.

2011 Legislature approved $5 million for construction grants to the authorized systems and provided financial support to all four systems for adminstration costs. In 2012, the regional water systems received $1.96 million in construction grants and $584,500 in administration grants. This money funds projects to meet the state share of the cost of each project.

- **Dry Prairie Rural Water serves the non-Tribal users of the Fort Peck -** Dry Prairie Regional Water System and currently delivers water to five communities in Sheridan, Roosevelt, and Valley Counties. Residents in the communities are experiencing increased demand for water from oil-field workers. This delivery system has temporarily relied on treatment plants in Culbertson and St. Marie as the source of their water. In FY2012, the Fort Peck- Dry Prairie regional water system completed a state-of-the-art water treatment plant that will connect the existing Dry Prairie distribution system and eventually serve 20 tribal and non-Tribal communities and nearly 4,000 farms, ranches and rural homes.
- **The Rocky Boy's/North Central Regional Water Project** is also the result of a partnership between the Tribal governments on the Rocky Boy's Reservation and the North Central Montana Regional Water Authority. In FY2012, this system began delivery to 3 communities using an interim water supply from the Tiber Water District until the treatment plant is completed.
- **The Dry-Redwater System** is still in the planning stages. Once construction is underway, it will begin to serve Montana communities experiencing rapid growth due to oil production activities. The Dry-Redwater system will bring regional water to portions of five counties in eastern Montana, between the Missouri and the Yellowstone rivers, reaching from the lower Musselshell to the Montana-North Dakota border.

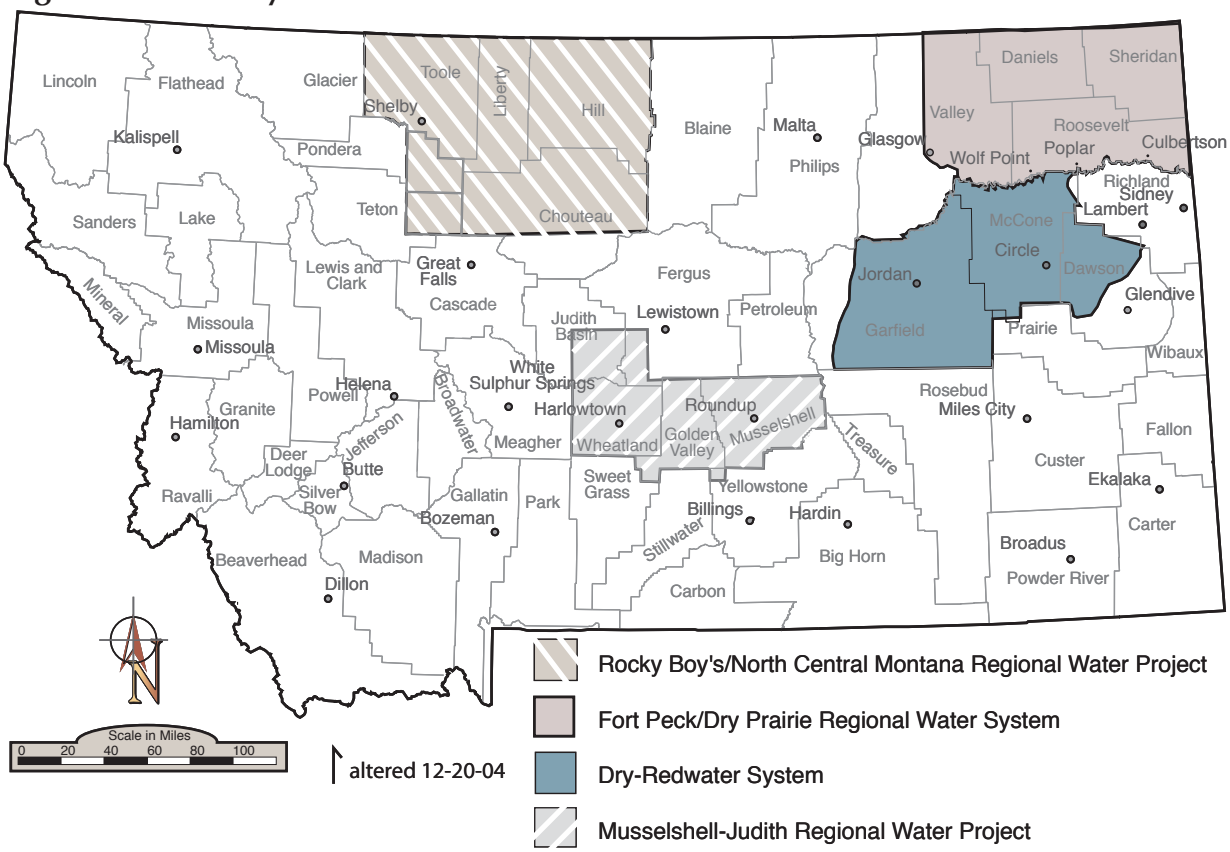
Rocky Boy Core Pipeline Construction. Photo by Mary Heller.

- **The Central Montana Regional Water Project** is comprised of member systems along the Judith and lower Musselshell rivers in central Montana. The communities of Harlowton and Roundup will be the two largest towns connected to the system. This system will be served by groundwater, eliminating the need for a water treatment plant, and is currently drilling a deep well into the Madison Formation near Judith Gap that is expected to serve as a source of water for the system.

Web sites featured in this section:

www.dnrc.mt.gov/cardd.

Figure 7
Regional Water System Service Areas



Safe and Effective Wildland Fire Suppression

The Montana DNRC and its partners are responsible for wildland fire suppression on millions of acres across the state. The 2012 fire season was an historic event, burning more than a million acres. The DNRC affects the lives of Montanans every day by responding to fires on private land and working quickly to extinguish them. Here's a note from Marty and Cindy McCaffree, whose property was threatened by the Bascom Road Fire:

"Your crews were amazing to work with and always kept us involved with what was happening. Thanks again for everything! Many people don't realize how you all put your lives on the line every day, but we do!"

This page: A DNRC engine crew battles the Mission Road fire south of Great Falls. Photo by John Grassy.

Facing page: Delivery of newly-developed wildland fire engines from the DNRC Equipment Development Center in Missoula.

Forestry Division

The mission of the DNRC Forestry Division is to ensure sustainability of Montana forests, rural lands, and communities through cooperative wildland fire protection, sound forest management practices, and by promoting a viable forest-based economy. Headquartered in Missoula, the Forestry Division consists of the Fire and Aviation Management, Forestry Assistance, and Business Management bureaus, along with Program Planning/Public Affairs programs. Statewide program managers and specialists provide program leadership for projects and services delivered through a network of field offices statewide.

Forestry Division personnel strive to achieve the following goals:

- healthy forests and rangelands through effective response to wildfire, insect pests, and disease;
- safe, effective wildfire suppression, with a goal of suppressing all fires through initial attack;
- broad application of conservation practices on all lands in Montana;
- resource protection through enforcement of state forest practices laws;
- vibrant communities with parks, boulevard trees, and natural areas, and
- an integrated forest industry in Montana through sustainable forest managmenent projects on private, state, and federal forest lands.

The division represents the state's interest in management of state, private, Tribal, and federal forested lands, promoting sustainability and collaboration among diverse stakeholder groups. Public education and outreach are also vital to the mission of the division; extensive efforts to collaborate with partners, share information in an accurate and timely manner, and conduct education/outreach activities are performed throughout the year. For additional information about the division's organization, programs, and activities, visit the web site: www.dnrc.mt.gov/forestry.

Fire and Aviation Management Bureau

The DNRC Fire and Aviation Management Bureau provides resources, leadership, and coordination to Montana's wildfire services to protect lives, property, and natural resources. Such services are accomplished through wildfire prevention, training, preparedness, and safe, aggressive fire suppression. The DNRC works with local, Tribal, state, and federal partners to ensure wildfire protection on all state and private land in Montana.

Suppression

The DNRC provides wildland fire leadership to Montana to protect the natural resources of the state by preventing and suppressing wildland fires. All wildlands in Montana have some form of fire protection. A total of 50,265,678 acres of state-owned and private lands is protected. The fire suppression responsibility is delivered through the following programs: the Direct Protection Program, through which DNRC responds directly to fire starts on state protection; the County Cooperative Fire Protection Program, though which local responders within the

Table 11
Direct Fire Protection by DNRC in FY 2012

Category	State and Private Lands (Acres)	Public Lands (Acres)
State and Private Lands	3,469,579	
USDA Forest Service (USFS) Lands		888,069
USDOI Bureau of land Management (BLM) Lands		783,576
Tribal/BIA Lands		3,251
U.S. Bureau of Reclamation (BOR) Lands		2,776
U.S. Fish and Wildlife Service (FWS) Lands		43,078
TOTALS	**3,469,579**	**1,720,750***

* DNRC subcontracts the same amount of state and private land acreage to the federal agencies in exchange for providing protection to these federal lands.

county assist with fire suppression; and the Aviation Program, which provides statewide support through use of helicopters for suppression and fixed-wing aircraft for aerial detection.

The 2012 fire season was an active one in Montana across all ownerships. More than 2,100 fires charred more than a million acres of private, state, tribal and federal lands. The Montana DNRC responded to 389 fires, which burned 528,916 acres.

Direct Protection

DNRC staffs 65 engines and water tenders and seven helicopters to provide direct fire protection on 5.2 million acres. This includes approximately 3.5 million acres of state and private lands and 1.7 million acres of federal public lands. Table 11 illustrates the total acres within the DNRC'S Direct Protection Program:

County Cooperative Fire Protection

As mentioned, DNRC has fire protection responsibilities for roughly 50 million acres statewide; 5.2 million lies within the direct protection program. The remaining 45 million acres is protected by a network of 400 fire departments statewide through the County Cooperative Fire Protection Program. DNRC provides training, prevention materials, and equipment and assists on fires that escape the capabilities of the county. More than 350 engines and water tenders are on loan and located throughout each county across the state.

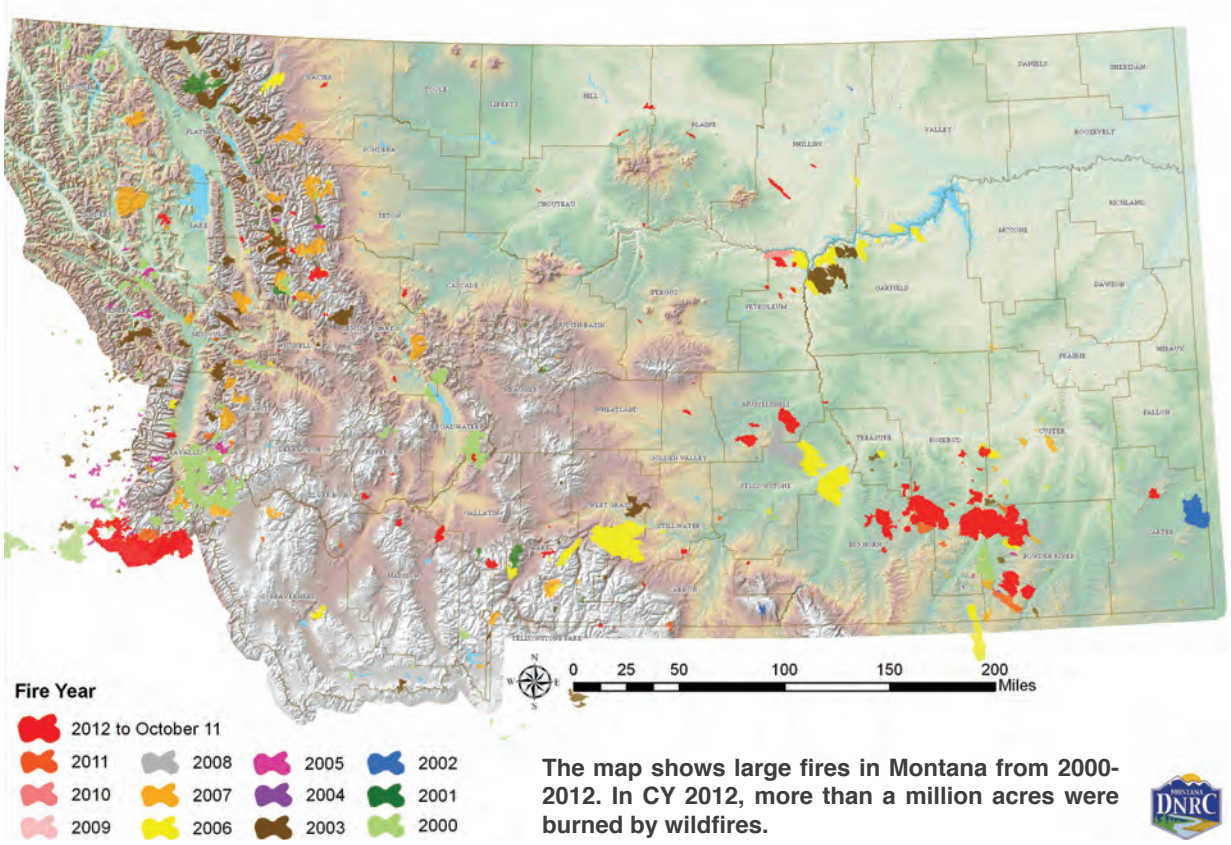
Another important component of the County Cooperative Fire Protection Program is the Volunteer and Rural Fire Assistance (VFA/RFA) Program, which provides grants to county fire agencies for equipment, training, and fire prevention materials. The program is funded by the USDA Forest Service and the U.S. Department of the Interior. Counties submit consolidated, prioritized grant requests on behalf of their fire organizations. Projects are funded based on recommendations from an interagency selection committee, and DNRC administers grant agreements for the approved projects.

In FY12, the grant program consisted only of Volunteer Fire Assistance from the USDA Forest Service. A total of $441,090 was awarded for project statewide.

Aviation

The DNRC operates and maintains a fleet of 10 aircraft, including seven helicopters and three fixed-wing airplanes. The three Cessna 180 series fixed-wing aircraft based in Helena, Missoula, and Kalispell are used primarily for fire patrol and personnel transportation. Three of the five MT-205 series, type 2 helicopters (also in Helena, Missoula, and Kalispell) are used for direct protection, and two are used for statewide fire support. Two light, type 3 Bell 206 B-III helicopters are stationed in Helena and are also available for use statewide. One is owned by the DEQ. DNRC maintains this aircraft and provides pilot services to DEQ in return for the right to use this aircraft for fire missions. The second light helicopter is used as a back-up aircraft or for additional coverage and fire administrative missions.

Figure 9
Large Fires 2000-October 11, 2012



The map shows large fires in Montana from 2000-2012. In CY 2012, more than a million acres were burned by wildfires.

In CY 2012, these aircraft flew a total of 1,967.9 hours. Program statistics are shown in Table 12.

Preparedness

The DNRC administers numerous programs aimed at effective fire preparedness and capacity building for local, Tribal, and state fire organizations. The fire preparedness effort is focused in four areas: the Fire Prevention Program, which seeks to educate Montanans about fire risk, the wildland urban interface, and reducing human-caused fires; the Fire Training Program, which provides statewide training opportunities for DNRC and local government personnel; the equipment development center, which builds and maintains wildland fire equipment and communications; and fire support programs, such as GIS and fire assessment fees.

Fire Prevention

The DNRC Fire Prevention Program seeks to reduce human-caused wildland fires which, in turn, reduces property and resource loss, improves safety, and reduces suppression costs. Public awareness programs, such as the Keep Montana Green (KMG) poster contest for all grades statewide and the KMG Prevention Awards provide consistent messages about the importance of reducing human-caused fires. The DNRC also collaborates with Fire Safe Montana, Fire Ready Montana, and the Ready, Set, Go! programs, all with a similar prevention/preparedness message.

DNRC also administers the Firewise Communities USA Program, which recognizes communities for their efforts to reduce the risk of fire in the wildland urban interface. Montana has 14 Firewise Communities.

In 2012, the DNRC helped host an Interagency Fire Prevention Team to assist with prevention activities around the state. The team drafted a strategic plan, assisted with product development, and assisted with the production of several new public service announcements that can be used throughout Montana.

Fire Training

DNRC provides training in fire prevention, detection, investigation, suppression, aviation, communications, safety, prescribed fire, participation on incident management teams, and wildland fire-training instruction. In addition, training staff provide opportunities for DNRC and local government overhead and management personnel at the Northern Rockies Interagency Training Center, National Fire Academy, and National Advanced Fire and Resource Institute.

In FY 2012, 43 employees attended upper-level fire management/suppression courses conducted by the Northern Rockies Interagency Training Center for DNRC and local government. In the Northern Rockies Coordinating Group Zones, DNRC coordinated and instructed 131 courses for 2,108 agency and local government participants, including DNRC employees. DNRC provided 57 days of instruction at the Northern Rockies Interagency Training Center during the 2012 training season and sponsored 31 people to attend training at the National All Hazard Incident Management Team Conference through grant funding. Program staff continue to work with Disaster and Emergency Services in the development of Type 3 Incident Management Teams to provide greater depth to incident management teams at the local and state response level. Staff have developed fire response training for Department of Transportation's first responders who support fire incidents and continue to train law enforcement, upon request for the same purpose.

Through the County Cooperative Fire Protection Program, DNRC sponsored 51 Suppression Skills, Incident Command System, Basic Wildland Firefighting, and Standards for Survival courses for all 56 counties. DNRC participated as one of two states in BLM's/ International Association of Fire Chiefs' Recognized Prior Learning pilot program being developed for national implementation. DNRC maintains the qualifications of and certifies several hundred DNRC and local government firefighters utilizing the Incident Qualification System.

Equipment Development Center

Through its Equipment Development Program, DNRC obtains new vehicles and federal excess property and develops them into fire suppression equipment and vehicles. This equipment is used to support the DNRC Direct Protection and County Cooperative Fire Protection programs. In FY 2012, DNRC obtained supplies and vehicles through the Federal Excess Property and Department of Defense Firefighter programs with a total acquisition value of $3,090,357.

Table 12
CY 2012 Aviation Program Accomplishments

Water/retardant dropped	**3,458,052 gallons**
Cargo delivered	**173,555 pounds**
Flight hours per operation	
Fire administration	**195.9 hours**
Fire detection/reconnaissance	**435.6 hours**
Fire suppression–initial attack and extended attack	**1,193.4 hours**
Fire training	**72.1 hours**
Nonfire missions	**32.9 hours**
False alarms	**9.6 hours**
Maintenance	**22.0 hours**
Non-Fire Emergency	**6.4 hours**
Total	**1,967.9 hours**

Table 13
Equipment Development Program Projects in FY 2012

Type 5 fire engines	**19**
Diesel transport puller	**1**
Communications truck	**1**
Type 2 water tender, 3,500 gallon	**1**
Type 4 fire engines	**2**
Flatbeds	**25**
Pump panels	**25**
Rebuilt pump heads	**20**

DNRC'S Equipment Development Center in Missoula built a water tender from a converted military M977 8 wheel drive HEMMT, believed to be the first of its kind in the nation. This vehicle is in Rosebud County.

The development projects completed in FY 2012 are listed in Table 13.

Fire Support Programs

DNRC Fire Support Programs provide financial and technical expertise to assist all fire programs in meeting their respective goals and mandates. Fire support programs include the fire assessment program, which tracks fire assessment fees collected through the Montana Department of Revenue in support of the DNRC fire management programs, design and maintenance of DNRC's radio system to ensure effective communications during wildfire response, and Geographic Information Systems (GIS) support including fire mapping, fire protection boundary mapping, wildland urban interface mapping, and miscellaneous additional products.

DNRC continues to monitor the status of local governments developing community wildfire protection plans (CWPPs) as directed in Senate Bill 131. Approved CWPPs have been collected for 52 counties and incorporated into a map of the wildland urban interface.

Forestry Assistance Bureau

DNRC Forestry Assistance Bureau programs work to maintain and improve the health of Montana's forests, forested watersheds, and the communities that depend on them. Forestry Assistance promotes forest stewardship in communities and forestlands through information and education, technical assistance, financial assistance, partnerships, and forest practices regulation. Partnerships with the U.S. Department of Agriculture provide funding and program guidance for a variety of programs geared toward landowner and community assistance.

In 2010, the Forestry Division's Statewide Assessment of Forest Resources model and subsequent Forest Action Plan (FAP) were approved by the U.S. Forest Service and the U.S .Secretary of Agriculture. The FAP sets the implementation track for delivering S&PF programs to critical landscapes identified in the model. The FAP also identifies indicators for each "Focus Area," defines strategies, creates linkages between programs, and sets targets.

Focus Area 1: Forest Biodiversity and Resilience

Resiliency is the capacity of a forest ecosystem to absorb disturbance and to reorganize while undergoing change, retaining ecosystem functionality and structure. Forest biodiversity is the variety and abundance of life forms, processes, functions, and structures of plants, animals, and other living organisms in forested areas. The bureau promotes forest resiliency and biodiversity by working with landowners, communities, and partners utilizing educational, technical assistance and financial assistance opportunities, and through administration and implementation of the states forest practice laws, rules, and programs.

The DNRC Private Forestry Assistance program assists private forest landowners with activities, such as timber harvest, to meet their land management objectives.

Focus Area 1 Accomplishments

Forest landowner technical assists to landowners and communities	2077
Timber harvest BMP assists	197
BMP/SMZ workshops	5 workshops, 159 participants
Streamside management zone alternative practices approved	40
Streamside management zone violations	9
Forestry educational opportunities	68 functions, 2,131 participants
Insect and disease workshops/presentations	7 workshops, 508 participants
2011 forest conditions report	Published
Grants administered during 2012	43 grants totaling $6.4 million
New grants received in 2012	3 grants totaling $391,000
Slash hazard reduction agreements opened	420
Slash hazard reduction agreements closed	667
Slash hazard reduction administrative fees collected	$53,475
MSU forestry extension educations fees collected	$28,007

DNRC's Conservation Seedling Nursery grows more the 750,000 seedlings each year for reforestation and conservation plantings.

Conservation Seedling Nursery

Nursery Seedling Sales from FY 2011 to FY 2012

	Conservation Seedling Program				Trust Land Seedling Program	
Fiscal Year	Seedlings sold	Gross Revenue from sales	Total expenses	Nursery cash balance	Seedlings grown	Total expenses
2011	729,991	$462,802	$647,632	$158,521	78,691	$40,028
2012	767,999	$734,169	$597,233	$190,887	85,332	$39,849

Focus Area 2: Wildfire and Public Safety

Wildfire and Public Safety continue to challenge the wildland and structural fire services in Montana. In the past decade, wildland fires have threatened and, in some incidents, burned through small towns in Montana destroying homes, public infrastructures, and businesses. Continued focus and expanded emphasis on wildfire prevention and suppression is critical in managing Montana's wildfires while providing for firefighter and public safety.

Focus Area 2 Accomplishments	
Fuel hazard reduction grants administered	21 grants totaling $2.4 million
New grants received in 2012	9 grants totaling 1.9 million
Wildfire protection assists to forest landowners	36

The 2012 fire season was one of the most active on record.

Focus Area 3: Forest Products & Biomass Utilization

To maintain strength and competitiveness in changing markets and practice sustainable forestry, Montana's forest products sector must be adaptive and diversified. Maintaining mill capacity and infrastructure to utilize and process forest products is an essential component to managing forest lands in Montana. Montana mills began to diversify beyond sawlogs in 1950 and continue to manufacture value-added products including plywood, log homes, post and poles, engineered studs, and furniture as well as biomass residue-based products such as fiberboard, wood pellets, landscaping products, animal bedding and energy.

Montana's program is recognized as a clearing house for information on all types of industrial biomass use in Montana and acts as the contact for industry organizations and for industry to bring issues to the DNRC. DNRC works as an equal partner with industry on critical issues such as timber supply, state agency laws and rules, new market identification, and wood products development.

Focus Area 3 Accomplishments	
Total Number of Fuels For Schools and Beyond Biomass energy projects	14
Total dollars saved by heating participating facilities with wood	$1 million/year
Total population warmed with wood at Fuels for Schools facilities	5,000
Mill energy audit studies and biomass energy feasibility studies completed	5
Biomass utilization grants	$128,547
Energy audits conducted at mills	5

Completed and distributed "Montana Biomass Utilization Strategy." Revived "Buy Montana Wood" marketing campaign.

Focus Area 4: Sustainable Urban Landscapes

An urban or community forest refers to a collection of trees and shrubs found growing in cities and towns. These areas include city parks, landscaped boulevards, and trees on public, private, and commercial lots. A sustainable urban landscape relies on support by the residents in a community through funding, planning, and active involvement. Montana is home to over 185 cities, towns, and Census-designated places where the majority of the state's population resides. With only four communities in Montana housing professional urban forestry staff, and threats like insects and disease, development, and funding crisis, the concept of sustainable urban landscapes is as important now as it has ever been.

Focus Area 4 Accomplishments	
Communities with "developing" and/or "managing" programs	63
Number of Montana "Tree City USA" communities	44
Total population living in Montana "Tree City USA" communities	459,437
Total expenditures of Montana "Tree City USA" communities	$2.96 million
Total amount of UCF Arbor Day grants awarded	$35,100
Total amount of UCF program development grants awarded	$115,450
International Society of Arboriculture credits offered through Montana UCF	20.5
Number of hours of UCF volunteer service logged	6,334
Value of volunteer hours	$95,010

Focus Area 5: Changing Forest Ownership Patterns

Montana, like many states across the West, is experiencing both development and divestiture of commercial timberlands into both private and public domain. Large, contiguous blocks of private forests are at risk for fragmentation through multiple owners and land management styles and land-use conversion driven by changing population demographics and economic and market forces. Impacts of fragmentation include wildlife habitat degradation, reduced forest resiliency, public access issues, and increased challenges of providing public services and fire protection for ex-urban developments. These trends have significant implications for Montana's social and environmental future.

Focus Area 5 Accomplishments	
Partnered with MT FWP to secure 1 Forest Legacy conservation easement grant	$6.5 million, 28,000 acres

Web sites featured in this section:

www.dnrc.mt.gov/forestry
www.dnrc.mt.gov/forestry/assistance/pests.

Protecting Montanans Through Regulation and Remediation

The Oil and Gas Conservation Division works to protect Montana citizens and the environment from the impacts of oil and gas operations. Division staff identify projects and hire contractors for remediation activities such as plugging orphaned wells and restoring abandoned well sites. The division also inspects well locations to ensure operations comply with state regulations. The result is protection for Montanans and their environment from actual or potential hazards associated with oil and gas activities.

Contaminated soil in the pit at the Big Wall Tank Battery waiting to be excavated and land farmed. Photo by Steve Sasaki.

Land farming of contaminated soil at the Big Wall Tank Battery site. Photo by Steve Sasaki.

The pictures above show remediation work at the abandoned Big Wall Tank Battery site, located north of Roundup in Musselshell County. The former pit at the site is contaminated with hydrocarbons, junk and scrap iron approximately 10-12 feet deep. It is being excavated and the soil is "land farmed" to remove the hydrocarbons. Land farming consists of spreading contaminated soil on clean ground, adding fertilizer to stimulate the natural bacteria in the soil to eat the hydrocarbons, turning the soil onces a month, and then returning it to the original site after the contaminants are gone, which usually takes about two years.

Oil and Gas Conservation Division

The Board and Staff

The Board of Oil and Gas Conservation (board) is established in Section 2-15-3303, M.C.A., and is allocated to the DNRC for administrative purposes only as prescribed in Section 2-15-121, M.C.A. The board's staff of 21.5 FTEs is housed in the Oil and Gas Division of DNRC and regulates the exploration and production of oil and gas in the State of Montana. Staff is located across the state: at the technical office in Billings, the administrative office in Helena, and the field office in Shelby; field inspectors are stationed in Miles City, Plentywood, and Sidney.

The board consists of the following seven members appointed to four-year terms by the governor:

- **Chairman Linda Nelson, a landowner with minerals from Medicine Lake**
- **Vice-Chairman Wayne Smith, an industry representative from Valier**
- **Don Bradshaw, an industry representative from Fort Benton**
- **Ronald Efta, a public member and attorney from Wibaux**
- **Jay Gunderson, a public member from Billings**
- **Jack King, an industry representative from Billings**
- **Bret Smelser, a landowner without minerals from Sidney**

The board meets six times each year for a two-day business meeting and public hearing. Four of these two-day meetings are in Billings at the board's new hearing room, one is held at MT Tech in Butte each spring to coincide with senior student poster presentations, and for the past five years one has been held each June in Sidney.

Please visit the board's web site at www.bogc.dnrc.mt.gov and click on the "About MBOGC" tab for more details about board members, office locations, and staff.

Programs

The board and staff administer two programs: the Oil and Gas Regulatory Program and the Underground Injection Control (UIC) Program.

The Oil and Gas Regulatory Program has four primary goals: a) prevention of waste of oil and gas; b) conservation of oil and gas; c) protection of correlative rights; and d) prevention of harm to surface or underground resources from oil and gas operations. To meet these goals, the board and staff regulate approximately 4,500 producing oil wells and 6,500 producing gas wells in the state and administer an orphaned and abandoned well-plugging program.

The UIC Program is administered through a primacy agreement with the EPA. The goal of the program is to protect underground sources of drinking water from contamination from improper disposal of liquid oil field wastes. The board regulates approximately 1,100 injection wells in the state under the EPA primacy agreement.

Funding

The Oil and Gas Conservation Division has six primary funding sources:

- **Privilege and license taxes**. The board receives a percentage of privilege and license taxes paid by oil and gas operators. Statute authorizes the board to receive up to 3/10^{ths} of one percent of the market value of crude petroleum and natural gas produced, saved, marketed, and stored in the state. The current rate set by the board is 0.9/10^{ths} of one percent. These funds support the Oil and Gas Regulatory Program.

  Since July 2005, the difference between the rate set by the board and 2.6/10^{ths} of one percent has been distributed to oil-impacted towns and counties as directed by the 2005 Legislature. At the end of 2011, that diversion had totaled almost $18 million.

- **Annual injection well fees**. The board is statutorily authorized to charge an annual fee of up to $300 per injection well to help defray the cost of administering the UIC Program. The current rate set by the board has is $200 per well.

- **Federal grant funds**. The board receives approximately $110,000 per year of grant funds

TABLE 1

Five-Year Oil Production

Region of State	2007	2008	2009	2010	2011
Northern Montana	1,401,762	1,442,557	1,391,914	1,398,400	1,434,003
Central	468,604	502,308	458,195	470,016	419,647
South Central	529,991	507,847	473,063	455,778	478,635
Northeastern	32,148,738	28,653,476	25,033,377	22,543,608	21,401,777
Southeastern	350,564	483,006	471,373	456,880	410,104
Total	**34,899,659**	**31,589,194**	**27,827,922**	**25,324,682**	**24,144,166**

from the EPA to administer the UIC Program.

- **Bond forfeitures**. Per statute, oil and gas operators in the state must post a bond with the board to assure their wells will be properly plugged and abandoned. The board can order forfeiture of those bonds, with notice, for failure to perform. The funds from bond forfeiture are placed in the statutorily appropriated damage mitigation account. The board uses those funds to plug orphaned/abandoned wells and as match for state Reclamation and Development Grant (RDG) well-plugging grant funds.

- **Interest from the RIT Fund**. The board is statutorily appropriated up to $50,000 each biennium from RIT interest income, based on the balance in the statutorily appropriated damage mitigation account. If the board qualifies for this funding, it is used to support emergency clean-up or plugging activities and to plug orphaned/abandoned wells. These funds have not been received for a number of biennia because the balance in the damage mitigation account has not dropped below $200,000, which is the trigger point for any distribution.

- **State grant funds**. The board receives at least $600,000 each biennium of (RDG) funds from the DNRC Conservation and Resource Development Division. These funds are used to plug orphaned and abandoned wells.

Activity Review

OIL - Over 21.4 million barrels of oil was produced in Montana in 2011. This is a decrease from the prior

An oil rig in Fallon County. Photo by John Reddy.

TABLE 2

Five-Year Gas Production

	2007	2008	2009	2010	2011
Non-associated Gas					
Northern Montana	58,326,103	53,955,196	46,370,882	43,023,656	37,562,787
Central	154,523	206,507	300,275	175,830	215,805
South Central	14,533,461	15,644,129	13,231,409	10,745,847	7,519,028
Northeastern	22,223,965	21,495,517	18,542,175	16,083,279	14,284,814
Southeastern	259,884	218,180	182,965	166,388	150,745
Subtotal	95,497,936	91,519,529	78,627,706	70,195,000	59,733,179
Associated Gas	25,291,643	28,057,489	26,674,714	23,416,904	19,790,478
TOTAL GAS PRODUCED	120,789,579	119,577,018	105,302,420	93,611,904	79,523,657

year primarily due to continued decreased production from the Bakken Formation in Elm Coulee Field in the northeastern part of the state. Table 1, on page 39, shows oil production in the state by region for the past five years.

GAS - A total of 79.5 million mcf (thousand cubic feet) of natural gas was produced in the state in 2011, also a decrease from the previous year. Reduced gas production is primarily the result of two factors: decreased oil and associated natural gas production from the Elm Coulee Field in northeastern Montana, and low natural gas prices which means operators do not replace declining gas wells with new producing wells because it costs more to drill for and produce the gas than they will receive for selling it.

Table 2, above, recaps total gas produced in the state for the past five years. It includes gas produced from gas wells (non-associated gas) and gas produced from oil wells (associated gas).

SPACING - In December 2011, after more than a year of testimony from industry and the public, the board issued Order No. 380-2011, which established special statewide spacing for wells drilled to the Bakken/Three Forks pool in specified areas in Richland, Roosevelt, and Sheridan counties. The new special statewide spacing is stand-up, 1,280-acre (two sections) temporary spacing units with 1,320-foot lateral setbacks and 200-foot heel/toe setbacks from the spacing unit boundaries for the initial well. Issuing this order recognized: a) the need to drill horizontal wells with longer laterals to maximize economics; and b) industry expert testimony that hydraulically fractured Bakken/Three Forks Formation wells do not drain more than 200 feet from the wellbore. This was a significant change from previous statewide spacing for the Bakken/Three Forks pool which was 640-acre (one section) temporary spacing units with 660-foot setbacks from the spacing unit boundaries.

Program Highlights

- The board held six, two-day meetings, had 571 applications for public hearing, and issued 483 orders.
- The board continued the clean-up and land farming of contaminated soil at the Big Wall Tank Battery site approximately 13 miles north of Roundup in Musselshell County.
- The board plugged and restored the surface of five orphaned and abandoned wells and one abandoned sludge pit in Teton and Toole counties.
- Field staff performed 4,195 inspections including:
  - 1,335 routine inspections;
  - 887 compliance checks;
  - 537 pit inspections;
  - 417 drilling/workover inspections;
  - 397 mechanical integrity tests witnessed;
  - 107 well pluggings witnessed;
  - 38 complaint investigations; and
  - 36 emergency responses.

Frac'ing the Bakken in Northeastern Montana. Photo by Bob Schmidt.

As part of their inspections, field staff visits well locations such as the one above during drilling and completion stages to ensure all operations comply with board regulations. This is another way the board and staff make a difference in the lives of everyday Montanans.

The hydraulic fracturing of wells (also known as "frac'ing") is a complex stage of the well completion process. It consists of two major steps: isolating sections of a cased wellbore and forcing pressure down the hole to crack rock formations through perforations in the casing; and pumping frac'ing fluid and sand at high pressure into the isolated sections to create more fractures and prop them open. A Bakken Formation horizontal well typically has 20-28 isolated wellbore sections that are hydraulically fractured.

In the picture of an actual frac'ing operation above, two semi-tractors/trailers in the foreground are loaded with frac sand. In the center of the photo is the control center, where engineers use computers, digital pressure gauges, and flow meters to monitor the entire job and direct workers on proper casing pressure, injection rates, and the blend of sand/water/gel that goes into the hole. At rear left are two hot oil trucks that heat up the water for the frac'ing fluid before blending the chemicals (gel) and sand. In the background are green-and-white tanks filled with water for the frac job.

A Degree of Certainty for Water Users

Montana's statewide adjudication of water right claims has been ongoing since 1979. An essential component of adjudicating the claims is to include quantification of the federal reserved rights held by Indian Tribes and federal agencies. The commission negotiates to settle Tribal and federal water rights so that all Montana water users have a degree of certainty regarding current and future water rights. The negotiations clarify amounts of water available for future development for all Montanans and provide the basis for federal and state funding for Tribes for mitigation of damages and revenue to build and repair infrastructure.

Facing legislatively mandated sunset on June 30, 2012, the commission is negotiating in earnest on the remaining compacts. The overarching goal is protection of existing water users. The negotiations give the Montana public the chance to have a say in how the water compacts are written at the negotiation stage, the legislative stage and finally, at the Montana Water Court stage of the process. The alternative of lengthy water rights litigation between state, Tribal, and federal governments will be expensive and not answer many issues that can be addressed in negotiations.

Dodson Diversion Dam, Milk River. Photo by Bob Fischer

Reserved Water Rights Compact Commission

Working to *"conclude compacts for the equitable division and apportionment of waters between the State and its people and the several Indian Tribes claiming reserved water rights within the state" (85-2-701, MCA)* and *"between the State and its people and the federal government claiming non-Indian reserved waters within the state"* (85-2-703, MCA).

The Montana Legislature created the Reserved Water Rights Compact Commission (RWRCC) in 1979, the same year that it created the Montana Water Court. The purpose of the commission is to negotiate water rights settlements, on behalf of the state, with Indian Tribes and federal agencies claiming federal reserved water rights in the state. For more information on the commission, and for links to the text of all completed compacts, please see the RWRCC web site at www.dnrc.mt.gov/rwrcc.

Lower Judith River. Photo by Stan Jones.

The Compact Commission

The RWRCC comprises nine members who serve four-year terms. One member is appointed by the attorney general's office, four by the governor's office, two by the speaker of the House, and two by the president of the Senate. Current RWRCC members are listed on the RWRCC web site. RWRCC is supported by a five-member staff including a hydrologist, an agricultural engineer, an attorney, a geographic information specialist, and a staff director. The staff is administratively attached to DNRC. The RWRCC is scheduled to sunset on June 30, 2013. The staff will continue implementation work after the sunset.

Federal Reserved Water Rights

A federal reserved water right is a right to water that was created when Congress or the President of the United States reserved land out of the public domain. Federal reserves in Montana are shown in Figure 10. Check the RWRCC web site for more background on federal reserved water rights.

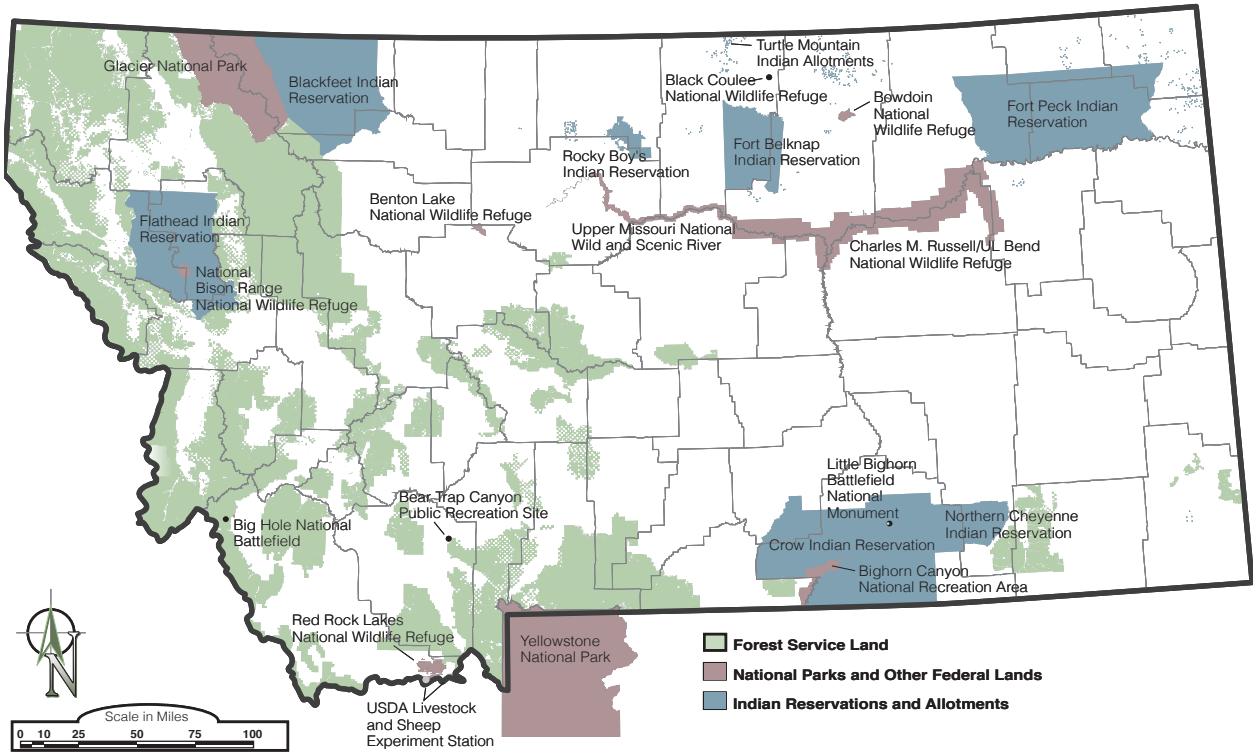
Current Negotiations

In 2011 and 2012 commission members and staff concentrated on the following Tribal and federal negotiations:

Confederated Salish and Kootenai Tribes (CSKT) of the Flathead Reservation

The primary emphasis of the commission and staff has been on the CSKT negotiations. Negotiating parties continue to hold monthly negotiating sessions in the Flathead area, and the Tribal, federal, and state legal and technical teams have been meeting or holding telephone conferences at least once each month. A draft of the compact was available for public review by late summer 2012. Primary components of the compact include: provisions for protection of existing state-based water users; quantification of the Tribes' on-reservation water rights; an ordinance governing the administration of water rights within the boundary of the reservation; resolution of the Tribes' claims to off-reservation water rights; and state contribution to settlement. The parties plan to submit

Figure 10
Federal Reserves in Montana



a compact to the Montana Legislature in 2013.

U.S. Bureau of Land Management, Upper Missouri River Breaks National Monument (UMRBNM)-Montana Compact

The U.S. Department of the Interior, Bureau of Land Management, and the State of Montana are negotiating a water rights compact for two Missouri River tributary basins, Arrow Creek and the Judith River. The UMRBNM was established in 2001. The proclamation limits the reservation of water to the two basins. The purpose of the reserved rights is for support of outstanding objects of biological interest, including cottonwood gallery forest ecosystems. Primary components of the compact include: a quantified base flow for the Judith River and Arrow Creek; restriction on new mainstem storage on Arrow Creek and the Judith River; and ramping requirements on new direct-from-source diversions. The United States has agreed to subordinate its 2001 priority date to June 1, 2012. The parties plan to submit a compact to the Montana Legislature in 2013.

U.S. Fish & Wildlife Service, Charles M. Russell National Wildlife Refuge (CMR)-Montana Compact

The U.S. Department of Interior, U.S. Fish and Wildlife Service (FWS), and the State of Montana are negotiating a water rights compact for the Charles M. Russell National Wildlife Refuge. The CMR was established by Executive Order in 1936 for the purpose of "the conservation and development of natural wildlife resources and for protection and improvement of public grazing lands and natural forage resources." The initial compact proposal from the FWS met with substantial public concern at the initial negotiation sessions. The parties are working on a revised proposal. The parties plan to submit a compact to the Montana Legislature in 2013.

Compact Implementation

After approval by the Montana Legislature, substantial work remains before a compact can be implemented.

Blackfeet Tribe of the Blackfeet Reservation

The Montana Legislature approved the Blackfeet-Montana Compact in 2009. The RWRCC staff continues to work with the Tribe, Montana congressional delegation, and federal agencies on federal ratification of the compact. The Blackfeet Water Rights Settlement Act of 2010 (SB 3290) was introduced to Congress on April 29, 2010. A hearing on the bill was held before the Senate Committee on Indian Affairs on July 22, 2010. A companion bill (HR 5592) was introduced in the House on June 24, 2010. Neither bill was enacted before the conclusion of the 111th Congress. The Blackfeet Water Rights Settlement Act of 2011 (SB 399) was reintroduced and referred to the Senate Committee on Indian Affairs on February 17, 2011. A hearing on the bill was held on October 20, 2011. The bill was introduced in the House as HR 3301 on November 1, 2011 and referred to the House Subcommittee on Water and Power. Further action on the bill is anticipated.

Crow Tribe of the Crow Reservation

The Montana Legislature approved the Crow-Montana Compact in 1999. On November 30, 2010, as part of the Claims Settlement Act of 2010, Congress ratified the water rights settlement among the Crow Tribe, Montana, and the United States, which had been ratified by the Montana Legislature in 1999. President Obama signed the bill. The federal settlement bill authorizes $460 million in federal funding for the Crow. The settlement package was approved by the Crow Tribe in a tribal referendum in March 2011. The Crow-Montana Compact Signing Ceremony was held in Washington, D.C., on April 27, 2012. The parties are preparing to petition the Montana Water Court to issue the settlement as a final decree in the Montana General Stream Adjudication.

Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation

The Montana Legislature approved the Fort Belknap-Montana Compact in 2001. Federal legislation to approve and fund the water rights settlement was introduced in the U.S. Senate on May 21, 2012. The bill, SB 3209 - Gros Ventre and Assiniboine Tribes of the Fort Belknap Indian Community Water Rights Settlement Act of 2012, was referred to the Committee on Indian Affairs.

U.S. Department of the Interior, Fish and Wildlife Service, National Wildlife Refuges

Bowdoin National Wildlife Refuge: The 2007 Bowdoin compact requires that the FWS and the state enter into a memorandum of understanding (MOU) to address salinity/blowing salt issues on the refuge. The parties have settled on a plan, which the MOU will formalize. The MOU outlines a strategy to balance the salts and minimize off-refuge risks from releases of saline water and wind-blown salt. The FWS recently finalized its Comprehensive Conservation Plan (CCP) for the Bowdoin refuge which includes specific short-term and long-term actions to address management of the accumulated salts on the refuge. The selected alternative calls for construction of a deep injection well to dispose of excess saline water, a common practice in the oil and gas industry. Public meetings specifically regarding the MOU were held in Glasgow and Malta in April 2012. When the MOU is completed, the parties will approach the Water Court to approve the compact in a special proceeding.

National Bison Range: The National Bison Range compact, approved by the 2009 Montana Legislature, has been signed by the United States. The water court issued the Bison Range Compact as a preliminary decree on September 30, 2011. One objection was received by the objection deadline. An initial settlement period has been set and a status report is due on November 19, 2012.

U.S. Department of Agriculture, Forest Service

A compact for the USDA Forest Service was approved by the 2007 Montana Legislature. The compact recognizes reserved water rights for the Forest Service for administrative uses, emergency firefighting, and for instream flows. The compact utilizes state law to create state-based water rights for instream flow on National Forest System lands. The compact is now going through the Montana Water Court. A hearing on the remaining objections to the compact was held by the Water Court on January 4, 2012. A decision is pending.

U.S. Department of Agriculture, Agricultural Research Service; Livestock, Range, and Research Laboratory (Fort Keogh); and Sheep Experiment Station

Compacts were approved by the 2007 Montana Legislature for the USDA Agricultural Research Service; Livestock, Range, and Research Laboratory (Fort Keogh), and the Sheep Experiment Station near Lima. Compact commission staff is working closely with the USDA to address lingering federal technical questions in hope of expediting final federal approval. When approval is received, the parties will approach the Water Court to approve the compact in a special proceeding.

Other Reserved Rights

Members of the Turtle Mountain Band of Chippewa Cree own numerous small allotments scattered throughout Montana. The RWRCC has met with the Tribe to discuss how to resolve potential water rights associated with the parcels. As of 2012, the United States has not assigned a federal team which is required for potential negotiations with the Tribe.

See Table 22 for completed compacts.

Web sites featured in this section:

www.dnrc.mt.gov/rwrcc

Completed Compacts

Table 22
Compacts Concluded by the Reserved Water Rights Compact Commission

Compact	Date Finalized
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation 85-20-201, MCA	May 1985
Northern Cheyenne Tribe 85-20-301, MCA PL 102-374	April 1991
U.S. Department of the Interior, National Park Service Yellowstone National Park Glacier National Park Big Hole National Battlefield 85-20-401, MCA	January 1994
U.S. Department of the Interior, National Park Service Little Bighorn Battlefield National Monument Bighorn Canyon National Recreation Area 85-20-401, MCA	May 1995
U.S. Department of the Interior. Bureau of Land Management Wild and Scenic Missouri River Bear Trap Canyon Public Recreation Site, Madison River 85-20-501, MCA	March 1997
U.S. Fish and Wildlife Service Benton Lake National Wildlife Refuge Black Coulee National Wildlife Refuge 85-20-701, MCA	March 1997
Chippewa Cree Tribe of the Rocky Boy's Indian Reservation 85-20-601, MCA PL 106-163	April 1997

Table 22
Compacts Concluded by the Reserved Water Rights Compact Commission (cont'd)

Compact	Date Finalized
Crow Tribe 85-20-901, MCA	June 1999, Special Legislative Session
Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation 85-20-1001, MCA	April 2001
U.S. Fish and Wildlife Service Bowdoin National Wildlife Refuge 85-20-1301, MCA	March 2007
U.S. Department of Agriculture Agricultural Research Service, Sheep Experiment Station 85-20-1201, MCA	March 2007
U.S. Department of Agriculture Agricultural Research Service; Livestock, Range, and Research Laboratory (Fort Keogh) 85-20-1101, MCA	March 2007
U.S. Department of Agriculture Forest Service 85-20-1401, MCA	April 2007
Blackfeet Tribe 85-20-1501, 85-20-1503, 85-20-1504, 85-20-1505, and 85-20-1506, MCA	April 2009
U.S. Fish and Wildlife Service National Bison Range National Wildlife Refuge 85-20-1601, MCA	April 2009

Trust Land Management Division: Recreational Use Projects Enhance Bird Habitat

The Trust Land Management Division is responsible for managing over 500,000 acres of State School Trust Lands classified as agricultural land for the production of small grains, pulse crops, oil crops, hay, and the Conservation Reserve Program also known as CRP.

Properly managed state lands can sustain high-quality habitat for native and introduced upland game bird species, and provide long-term hunting access opportunities for Montana sportsmen and women.

While the purpose of State School Trust Land is to generate income for Montana's educational system, well-planned habitat enhancement projects can economically benefit the various educational trusts, agricultural producers, sportsmen and women, and wildlife resources. Shelterbelts, food plots, and cover crops enhance wildlife habitat, as well as preventing erosion and promoting better soil health.

The Upland Game Bird Habitat Enhancement Program is one example of how agricultural lessees, sportsmen and women, and partnering state and federal agencies are enhancing habitat on State School Trust Lands to provide long-term recreational upland game bird hunting opportunities for generations to come.

A newly planted, eight-row shelterbelt on State School Trust Land in Teton County. Photo by Diane Boyd, wildlife biologist, Montana Fish, Wildlife & Parks.

Trust Land Management Division

The mission of the Trust Land Management Division (TLMD) is to administer and manage the state trust timber, surface, and mineral resources for the benefit of the Common Schools and other endowed institutions in Montana, under direction of the Board of Land Commissioners. The Board of Land Commissioners, which is also known as the "State Land Board," consists of Montana's top elected officials:

- Governor – Brian Schweitzer
- Attorney General – Steve Bullock
- Secretary of State – Linda McCulloch
- Auditor – Monica Lindeen
- Superintendent of Public Instruction – Denise Juneau

The division is divided into four primary programs: agriculture and grazing management, forest management, minerals management, and real estate management. Staff and program specialists in Helena and Missoula provide program administration, direction, oversight, and support. Field personnel throughout the state provide on-the-ground management. Additional program information can be found at the division's web site: www.dnrc.mt.gov/trust/.

The department's obligation is to obtain the greatest benefit for the school trusts pursuant to 77-1-202, MCA. The greatest monetary return must be weighed against the long-term productivity of the land to ensure continued future returns to the trusts.

School Trust Lands in the foreground of the Sawtooth Mountain Range. Photo by Casey Kellogg.

History

By the Enabling Act approved February 22, 1889, the Congress of the United States granted to the State of Montana, for Common Schools (K-12) support, sections 16 and 36 in every township within the state. Some of these sections had been homesteaded, some were within the boundaries of Indian reservations, and others had been disposed of before passage of the Enabling Act. Other lands were selected by the state in lieu of these lands.

The Enabling Act and subsequent acts also granted acreage for other educational and state institutions, in addition to the Common Schools. The trust beneficiaries of these institutions include:

- The University of Montana
- Montana State University–Morrill Grant
- Montana State University–Second Grant
- Montana Tech of The University of Montana
- State Normal School (Montana State University –Billings and The University of Montana–Western)
- Public Buildings
- School for the Deaf and Blind
- State Reform School (Pine Hills)
- Veterans Home

In FY 2007, approximately 2,600 acres were donated to the State of Montana for school trust land. This donation added acreage to the School for the Deaf and Blind and created a trust for the Montana Developmental Center and the Montana State Hospital. Two other trusts have

been created since, Public Land Navigable Rivers and Acquired Lands.

The total acreage (see Figure T-1) has fluctuated through the years due to land sales and acquisitions. Surface acreage at the end of FY 2012 totals more than 5.1 million acres; mineral acreage exceeds 6.2 million acres. Mineral acreage exceeds surface acreage because the mineral estate has been retained when lands were sold.

The Permanent Fund

The Enabling Act states that proceeds from the sale and permanent disposition of any of the trust lands, or part thereof, shall constitute permanent funds for the support and maintenance of public schools and the various state institutions for which the lands had been granted. The Montana Constitution provides that these permanent funds shall forever remain inviolate, guaranteed by the State of Montana against loss or diversion. These funds are often referred to as "nondistributable." Figure T-2 shows the Permanent Fund balance over the last five years. The balance of the Permanent Fund was $509,639,733 for FY 2012.

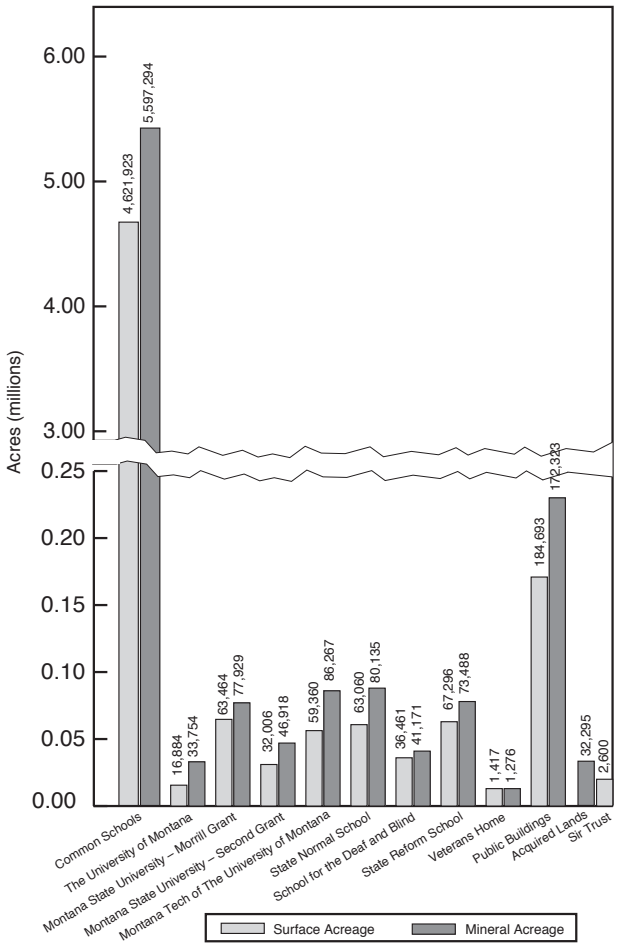
Revenues

Table T-1 shows the gross distributable and nondistributable interest and income proceeds for each of the trust beneficiaries. A small portion of trust revenues are used to fund administrative appropriations through the Trust Administration Account. In addition to management activities on behalf of trust beneficiaries, the Trust Land Management Division (TLMD) generated other revenues and distributions in FY 2012. The five-year summary presented in Table T-2 shows gross revenues of more than $113 million for all division activities. Total gross revenues generated by the division over the last five years are listed by activity in Table T-2. This table contains not only trust revenues, but also those revenues collected for other state entities, the General Fund, revenues generated to fund appropriations, and other miscellaneous revenues.

School Facility and Technology Account

The 2009 Legislature approved HB 152, which eliminated the Technology Acquisition and Depreciation Account and replaced it with the School Facility and Technology Account. This account contains certain revenues from the sale of timber on Common Schools' land, as defined in 20-9-516, MCA. In FY 2012, the TLMD generated $1,696,918 from the sale of timber on Common Schools' land (in excess of 18 million board feet [mmbf]), and $12,966 from a grazing lease on the recently acquired land in the Potomac area. The School Facility and Technology Account is managed by the Department of Commerce.

Figure T-1
Current Land Ownership
(as of August 13, 2012)



* Mineral acreage includes oil & gas lease acres only.

Figure T-2
Permanent Fund Balance

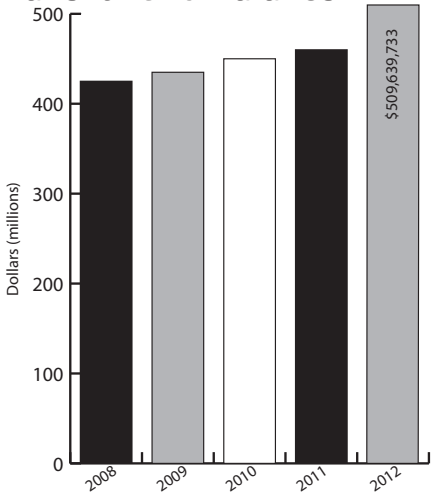


Table T-1
Revenues by Trust FY 2012*

Distributable Revenues Trust	Gross Distributable Revenues	Trust Earnings Reserves	Trust Admin Account (2)	Net Distributable Revenues
Common Schools (3) (4) (5)	$67,165,299	$0	$8,717,056	$58,448,243
Public Land Trust – Navigable Rivers (5)	4,307,208	0	141,291	4,165,917
The University of Montana	248,078	0	30,587	217,491
MSU - Morrill Grant (1)	593,252	0	0	593,252
MSU - Second Grant	1,230,534	0	365,684	864,850
Montana Tech	1,584,573	99,922	239,664	1,244,987
State Normal School	907,592	44,000	246,185	617,407
School for the Deaf and Blind	454,066	70,000	142,479	241,587
State Reform School	537,950	30,000	114,671	393,279
Veterans Home	18,724	168	151	18,405
Public Buildings	1,528,148	0	921,882	606,266
MT Developmental Center	1,574	0	649	925
MT State Hospital	1,574	0	649	925
Lands Acquired - Public School (6)	13,012	0	46	12,966
Total	**$78,591,584**	**$244,090**	**$10,920,994**	**$67,426,500**

Nondistributable Revenues Trust	Gross Nondistributable Revenues	Net Nondistributable Revenues	Permanent Fund Balance
Common Schools - permanent	$27,941,639	$27,941,639	$474,377,812
Public Land Trust – Navigable Rivers	883,778	883,778	1,439,486
The University of Montana	584	584	1,526,091
MSU - Morrill Grant (1)	93,298	93,298	4,109,885
MSU - Second Grant	33,019	33,019	8,907,480
Montana Tech	3,288	3,288	5,151,800
State Normal School	7,773	7,773	6,201,124
School for the Deaf and Blind	161,283	161,283	4,154,416
State Reform School	283,648	283,648	3,753,458
Veterans Home	0	0	17,107
Lands Acquired - Public School	1,074	1,074	1,074
Total	**$29,409,384**	**$29,409,384**	**$509,639,733**
School Facility and Technology Fund (6)	$1,696,918	$1,696,918	
TOTAL	**$109,697,886**	**$98,532,802**	**$509,639,733**

* Trust balances reflect deposit activity by DNRC and do not include valuation adjustments from investment activities by the Board of Investments.

(1) MSU-Morrill Grant administrative costs were transferred to the appropriation from fund 02297 per House Bill 19.

(2) Trust Land Administration Account reflects the FY 2012 actual expenditures and accruals by trust.

(3) Less 5% to permanent fund.

(4) Org 59 STIP and Trust & Legacy Revenue.

(5) Public Land Trust revenue is distributable to Common Schools 95/5% per Article 10 Section 5 and 77-1-103, MCA, and considered part of the Common Schools Revenue.

(6) School Facility and Technology Fund (77-1-218, MCA) includes $1,696,918 from Common Schools timber harvest over 18MMBF and $12,966 from a grazing lease per 77-1-218, MCA.

Table T-2
Five-Year Summary of Gross Revenue Generated by Activity

Activity	FY 2008	FY 2009	FY 2010	FY 2011	FY2012
Agriculture & Grazing Management					
Grazing Leases	$ 7,098,951	$ 7,163,795	$ 6,483,884	$ 6,625,329	$ 8,262,292
Agriculture Leases	12,790,465	14,650,880	11,472,726	14,088,829	15,636,680
Totals	**19,889,416**	**21,814,675**	**17,956,610**	**20,714,158**	**23,898,972**
Recreational Use					
General Licenses	71,754	82,176	82,451	87,730	103,699
Conservation Licenses	874,245	922,613	899,076	838,256	872,696
Special Recreation Use Licenses	107,588	85,839	105,783	117,721	124,625
Totals	**1,053,587**	**1,090,628**	**1,087,310**	**1,043,707**	**1,101,020**
Forest Management					
Timber Sales	10,000,724	7,584,556	8,044,850	8,615,896	5,553,562
Forest Improvement Fees	1,098,577	868,511	1,196,307	1,880,335	1,619,921
Totals	**11,099,301**	**8,453,067**	**9,241,157**	**10,496,231**	**7,173,483**
Minerals Management					
Oil & Gas Revenues					
Rentals/Bonuses/Penalties	6,037,002	15,748,957	11,178,110	17,733,994	20,992,127
Royalties	25,240,047	19,949,394	15,633,063	15,315,513	16,563,133
Seismic Exploration	9,976	8,216	1,361	11,700	10,115
Aggregate Minerals					
Rentals/Bonuses	100	100	0	200	500
Royalties	174,196	206,962	181,605	138,827	788,591
Coal					
Rentals/bonuses	41,524	41,524	85,911,425	67,015	71,555
Royalties	5,865,071	7,840,866	4,984,163	8,497,021	7,400,024
Other Minerals					
Rentals/Penalties	81,215	51,171	28,856	14,514	17,739
Royalties	4,680	81,864	142,123	2,271	2,692
Totals	**37,453,811**	**43,929,054**	**118,060,706**	**41,781,055**	**45,846,476**
Real Estate Management					
Rights-of-way/Easements	2,113,540	349,720	562,214	566,817	952,198
Residential Leases/Licenses	1,439,506	1,579,671	1,684,926	1,816,222	1,978,372
Land Sales	2,781,630	5,150,084	3,209,115	3,111,920	1,894,000
Other Leases/Licenses					
Commercial	975,531	1,031,377	1,181,581	1,253,421	1,556,316
Conservation	101,034	92,837	107,389	93,684	94,506
Other	27,431	32,412	23,166	81,712	64,876
Hydro Leases/Navigable Rivers	4,000,300	4,171,650	4,173,273	4,432,014	4,382,113
Totals	**11,438,972**	**12,407,751**	**10,941,664**	**11,355,791**	**10,922,381**
Other					
Trust and Legacy Interest	25,289,682	22,779,175	23,063,986	23,100,274	24,209,865
Other Revenues	915,483	493,149	271,015	220,933	333,773
Totals	**26,205,165**	**23,272,324**	**23,335,001**	**23,331,207**	**24,543,638**
TOTALS	**$107,140,252**	**$110,967,499**	**$180,622,448**	**$108,712,148**	**$113,485,970**

Revenue Distribution - Common Schools, Universities, and Other Trusts

The distribution of revenues generated from Common Schools trust land is illustrated in Figure T-3. From the distributable receipts, a small percentage is used to fund the Trust Administration Account (see Table T-1). Ninety-five percent of the remaining distributable revenue is distributed yearly to the state Guarantee Account for use by public schools of the state. The Permanent Fund comprises the other 5 percent, together with nondistributable revenue.

The interest earned on the Permanent Fund is also distributed to the Guarantee Account for use by public schools, with the exception of 5 percent, which is returned to the Permanent Fund for reinvestment.

Distribution of revenues to the university trusts and other trusts is similar to that of the Common Schools trust. The exception is the MSU-Morrill Grant, whose administrative costs are funded by the General Fund (House Bill 19, 2007 Legislature). For the university system trusts, timber sale revenues are considered distributable. The Public Buildings trust does not have a permanent fund; therefore, remaining receipts are distributed to the Department of Administration.

In addition to state trust land, the division manages some land for other agencies. Revenue generated from other agency land is transferred directly to the appropriate state agency.

FY 2012 Program Highlights

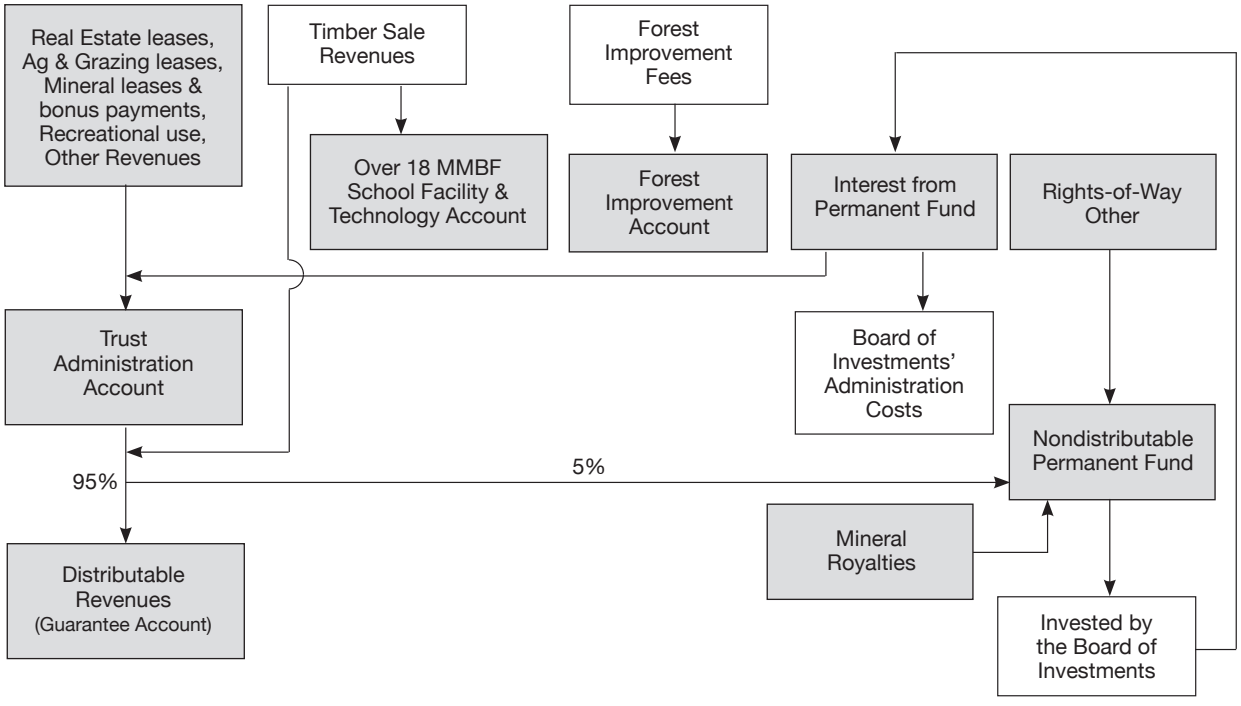
Agriculture and Grazing Management

The Agriculture and Grazing Management Bureau supervises the management and leasing of approximately 10,000 agreements for crop and range land uses on 4.68 million acres of school trust lands throughout the state.

Surface Leasing

The program is responsible for administrative functions associated with maintaining surface lease agreements. Annual activities include processing approximately 1,000 lease renewals; advertising, competitively bidding, and issuing new leases; reviewing and processing assignments, subleases, pasturing agreements, custom farming agreements, pledges, and mortgages; and collecting, verifying, and posting rentals and fees.

Figure T-3
Distribution of Revenues from Common Schools Trust Land FY 2012



Land Management

The program manages the agricultural and grazing resources on lands administered by the bureau. This responsibility includes evaluation and assessment of range and crop land condition; compliance with the Montana Environmental Policy Act (MEPA); administration of archaeological, paleontological, and historical properties on state trust land; investigations of lease noncompliance; participation in the federal Farm Program; and oversight of water developments, water rights, and improvement projects such as range renovation and resource development.

Agricultural and Grazing Lands

Currently, 3,000 agreements cover agricultural use of state trust lands. Crops raised on these lands are primarily dry land hay and small grains, but also include irrigated grain crops, corn, sugar beets, potatoes, peas, lentils, garbanzo beans, canola, safflower, alfalfa seed, and native grass seed.

In FY 2012, revenues totaling $15,636,680 were received from agricultural leasing on 580,000 acres. The majority of the leases are on a crop-share basis with the minimum share of 25% set by statute. In FY 2012, revenues increased by $1.6 million compared to the prior year, due to continued strong commodity prices, as well as excellent production throughout the state.

In addition to receiving rental payments from lessees, the state participates in and receives Farm Program payments from the U. S. Department of Agriculture (USDA) Farm Service Agency. For FY 2012, this amount exceeded $2.3 million for direct payment contracts and lands enrolled in the Conservation Reserve Program (CRP).

Approximately 8,500 agreements include grazing use of trust lands. The nearly 4.1 million acres of classified grazing lands and forest lands have an estimated carrying capacity of 990,000 animal-unit-months (AUMs). The minimum rental rate ($7.90/AUM) for grazing leases is set by a formula, which includes the average weighted price for beef cattle sold in Montana during the previous year. In FY 2012, grazing leases generated $8,262,292.

Recreational Use

The total number of wildlife conservation licenses sold in FY 2012 was 481,389, which generated $872,696 in gross revenue. A total of 10,447 general recreational use licenses were sold with revenues of $103,699. Special recreational use licenses generated $124,625.

Forest Management

The forest management goal is to sustainably manage

Cattle graze on the IX Ranch near Big Sandy. Photo by John Reddy.

Montana's forested trust lands to maximize long-term revenue while promoting healthy and diverse forests. The Forest Management Bureau oversees management of approximately 780,000 acres of forested state trust lands. Revenue from these lands is derived mainly from the sale of forest products. The State Forest Land Management Plan (SFLMP), approved by the State Land Board in 1996, associated rules (2003), and the Montana DNRC Forested State Trust Lands Habitat Conservation Plan (2011), guides management of forested state trust lands. This guidance is provided in the form of a general management philosophy and specific resource management standards.

Forest Product Sales

The forest product sales program incorporates activities and expenditures required to grow, harvest, and sell forest products from state trust lands. All timber sales and permits are developed, analyzed, and reviewed in the field by foresters and resource specialists to ensure that sales comply with all applicable laws, policies, and management direction. The current annual sustainable

Figure T-4
Timber Volume Sold and Harvested

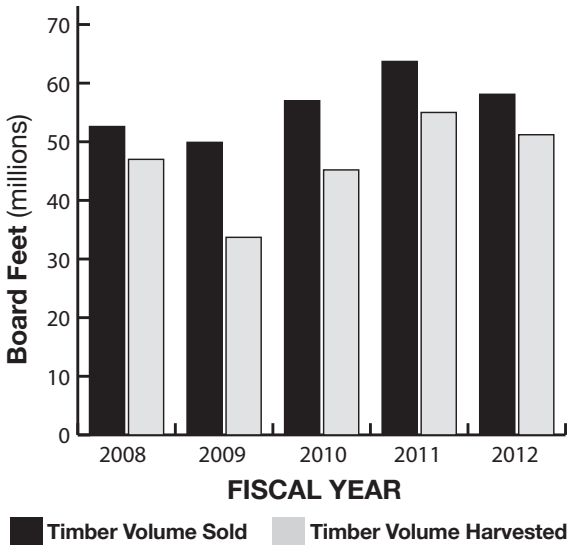


Table T-3
FY 2012 Forest Improvement Fees Collected by Trust

Trust	Amount
Common Schools	$1,176,415
Montana State University – Second Grant	13,279
Montana Tech	89,567
State Normal School	59,198
School for the Deaf and Blind	99,185
State Reform School	44,732
Public Buildings	137,545
Total	**$ 1,619,921**

yield from forested state trust lands is 57.6 million board feet as determined by the Habitat Conservation Plan Environmental Impact Statement.

Despite a challenging economic environment, the division maintained a successful forest products sales program through FY 2012. TLMD's Forest Management Program sold 58.1 million board feet (MMBF) through timber sales and permits. This sold volume has an estimated stumpage value of $7,819,491 and additional expected revenue of $1,393,939 in Forest Improvement fees. A total of 51.2 MMBF of timber and a minor amount of other miscellaneous forest products (posts, pulp, boughs, etc.) were harvested from state trust lands during FY 2012. This volume generated $5,553,562 in revenue for the year.

Habitat Conservation Plan

The Forest Management Bureau has developed a programmatic Habitat Conservation Plan in coordination with the U.S. Fish and Wildlife Service. This series of conservation strategies is designed to minimize the impacts of DNRC management activities on threatened or endangered fish and wildlife species, while providing DNRC with long-term management assurances and overall flexibility. The Director's Record of Decision was presented for approval to the Board of Land Commissioners in December 2011. With an affirmative board vote, the department engaged in a landmark agreement for a land management agency in Montana. For the first time in Montana, a forest management agency is implementing a long-term plan for managing the habitats of grizzly bear, bull trout, and Canada lynx.

Forest Improvement

The Forest Improvement Program uses fees from harvested timber to improve the health, productivity, and value of forested trust lands. Use of these fees authorized by statute, includes disposal of logging slash, reforestation, acquiring access, maintaining roads necessary for timber harvest, other treatments necessary to improve the condition and income potential of state forests, and compliance with other legal requirements associated with timber harvest. In FY 2012, the department collected $1,619,921 in Forest Improvement fees, as shown in Table T-3.

Minerals Management

The Minerals Management Bureau is responsible for leasing, permitting, and managing approximately 5,715 oil and gas, metalliferous and nonmetalliferous, coal, and sand and gravel agreements on over 2.7 million acres of the available 6.2 million acres of school trust land and approximately 5,650 acres of other state-owned land throughout Montana.

Oil and Gas Activity

The program is responsible for the leasing and management of 5,546 oil and gas leases, 641 are currently productive. The number of oil and gas leases managed is up 5.0%, while the number of currently producing leases increased by 2.2%, compared to FY 2011. Activities related to existing leases include collecting, verifying, and posting rental, royalty, delay drilling, and shut-in payments; reviewing and approving assignments and tracking working interest ownership; reviewing and preparing for approval communitization agreements and unit operating agreements; and coordinating with field offices the review

and approval of all proposed physical operations on state leases. In addition, four oral auctions of new oil and gas leases are prepared and conducted each year. A calendar of key oil and gas lease activities and dates is available on the division web site along with lease sale lists and sale results for viewing and downloading .

- In FY 2012, 1,338,893 barrels of oil were produced, an increase of 6.8% from FY 2011; and 4,123,736 MCF (thousand cubic feet) of gas, a 12.1% decrease from FY 2011.
- The four quarterly oil and gas lease auctions conducted in FY 2012 yielded bonus revenue of $15,087,974 from 1,445 tracts. This represents a 9.4% increase over FY 2011.

Other Mineral Leasing

Minerals Management staff also administers a wide variety of leases for other minerals, but primarily coal and aggregates. In FY 2012, 4,175,436 tons of coal were produced, a 13.2% decrease from FY 2011.

Royalty Audit

The Royalty Audit program provides additional revenue to the school trusts through programmatic audits. The program identifies royalty under- and over-reporting, rectifies discrepancies, and raises the level of voluntary compliance. Most audits have a single payer and involve multiple leases per audit. In FY 2012, the program completed six audits and collected over $69,000 in additional royalties and interest. Three audits were closed out with no additional royalties due. At the fiscal year-end, four audits were pending with preliminary assessments totaling more than $1.3 million.

Riverbed Leasing

The Minerals Management Bureau continues its efforts to clarify title to the beds and islands of navigable rivers. Pursuant to statute, the state owns those lands below the low-water mark; islands and their accretions formed in the riverbeds after statehood; and abandoned channels formed by avulsion. Because two navigable rivers in Montana flow through areas with major oil and gas resources, the department has conducted numerous riverbed studies to determine and document state ownership in those areas. Studies are also required in urban and developing areas.

In FY 2012, the program managed 41,275 acres of leased riverbed and island tracts. These tracts provided the state with $897,020 in oil and gas revenues. Eighteen tracts are currently under review to resolve ownership issues.

Real Estate Management

The Real Estate Management Bureau administers activities on lands classified as "other" and all secondary activities on lands classified as grazing, agriculture, or timber. The sources of FY 2012 real estate management revenues are summarized in Table T-2. Real estate activities include leasing, licensing, granting of easements (rights-of-way), land sales through the Land Bank Program, acquisitions

Thumper trucks performing a 3-D seismic shoot on state land. Photo by Scott Aye.

of land and land exchanges. The bureau also manages non-trust land activity for other agencies.

Land Sales, Acquisitions, and Exchanges

In FY 2012, the Land Banking Program sold 3,151 acres for a total sales price of $1,894,000. Table T-4 shows the acres sold by trust, income, and rate of return.

Land Acquisitions

No land purchases were made in FY 2012 in the Land Banking Program.

Prairie Elk Land Exchange

The Prairie Elk land exchange with the Prairie Elk Colony was completed in November 2011. DNRC acquired 128 acres of consolidated agricultural and grazing land for 82 acres of grazing land in McCone County. The trust involved in the exchange was Common Schools. The value of the land exchanged to the Prairie Elk Colony was $32,400; the value of the land received by the state was $48,600.

Confederated Salish and Kootenai Tribes Phase 2 Land Exchange

The second land exchange with the Confederated Salish and Kootenai Tribes (CSKT) was completed in December 2011. DNRC acquired 2,899 acres of grazing land in Flathead and Lake Counties for 2,103 acres of scattered, isolated forest land in Missoula County. The trust involved in the exchange was Common Schools. The value of the land exchanged to the CSKT was $1,721,100; the value of the land received by the state was $1,740,200.

Navigable Rivers

Senate Bill 35 was passed during the 2011 Legislature with an effective date of October 1, 2011. The bill clarified the definition of navigable rivers pertaining to the state's management authority for specific uses of navigable rivers. The department has drafted administrative rules to implement SB35 with adoption of the draft rules expected by January 2013.

Wind farm in central Montana. Photo by Robin Hein.

Wind Energy

The 135 Megawatt (MW), 90-turbine Judith Gap Wind Farm has been in operation for more than six years as of the end of FY 2012. The wind farm is operated by Invenergy (USA) and averages revenue to the Common Schools trust of more than $55,000 annually. In addition, more than 25,000 acres are currently under land use licenses for future development as wind farms. In early 2012, Gaelectric LLC was awarded the right to pursue a wind power lease on state and private lands near Harlowton. Phase 1 is planned as 80 MW and Phase 2 is planned as 350 MW; expectations are that 5-12 towers will be on state lands depending on final tower layout and turbine selection.

Residential Leasing

Cabin site revenue was at an all-time high of $1.9 million

Table T-4: Land Sold by Trust - FY 2012

Trust	Acres	Sales Price	# of Parcels	Annual Income	Return
MSU – Second Grant	160	$300,000	1	$690	0.23%
Common Schools	2,983	1,354,000	9	4,635	0.34%
State Normal School	8	240,000	1	4,300	1.79%
Total	**3,151**	**$1,894,000**	**11**	**$9,625**	**Average 0.51%**

Table T-5
University System Permanent Fund Balances FY 2008 – FY 2012

Trust	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
The University of Montana	$1,522,270	$1,523,365	$1,524,126	$1,525,507	$1,526,091
MSU–Morrill Grant	3,949,873	3,927,042	3,974,855	4,016,587	4,109,885
MSU–Second Grant	8,775,215	8,845,963	8,868,598	8,874,461	8,907,480
Montana Tech	5,098,100	5,101,605	5,146,772	5,148,513	5,151,800
State Normal School	6,084,590	6,093,459	6,137,054	6,193,351	6,201,124
Total	**$25,430,048**	**$25,491,434**	**$25,651,405**	**$ 25,758,419**	**$25,896,380**

despite a 10% vacancy rate in the spring of 2012.

Senate Bill 409, passed during the 2011 Legislature, directed the bureau to develop a competitive bidding method for the setting of annual lease fees. Rules implementing SB409 were approved by the Board of Land Commissioners in December 2011. Shortly after adoption of the rules in the spring of 2012, a preliminary injunction was filed by MonTRUST and the Montana Board of Regents, which halted further implementation. The preliminary injunction remains in full force, pending the final outcome of the court case.

Rights-of-Way/Easements

In FY 2012, the bureau processed 295 rights-of-way applications (ROW), which were approved by the Board of Land Commissioners. The department reviewed a number of historic applications for county roads, primarily from Valley, McCone, and Dawson Counties. In addition, several utility cooperatives received easements to upgrade facilities over significant portions of their service exchange areas.

Applications of note include an extensive relocation and construction of a new federal electric transmission line; an electric transmission line to serve a wind tower development project; a navigable river bridge crossing In Whitefish; and a private rail spur for coal transportation.

The acquisition of access to state trust lands remains a priority. The ROW Section was reorganized in June 2012, resulting in the dedication of an FTE to acquiring access statewide. As a result of the coordination effort between the state-wide access coordinator and the various area offices, multiple cost share and reciprocal packages have been initiated and are expected to be completed in the next couple of years. In FY 2012, the state received access to 1,280 acres of trust land via 11.27 miles of road pursuant to agreements being finalized with DNRC cooperators.

Montana Universities – Trust Lands

By the Enabling Act of 1889, the U.S. Congress granted acreage to the State of Montana for support of Common Schools (K-12 public schools) and other educational and state institutions, including the Montana University System.

Montana has five university trust beneficiaries as follows:

- The University of Montana
- Montana State University–Morrill Grant
- Montana State University–Second Grant
- Montana Tech of The University of Montana
- State Normal School (Montana State University–Billings (Eastern) and
  The University of Montana–(Western at Dillon))

University System Trust Land Acreage

The total acreage for all trusts has fluctuated through the years due to land sales and acquisitions. The acreage for each university is shown in Figure T-1. Surface acreage at the end of FY 2012 for the five trusts totaled 234,774 (or 4.6% of the total acreage) and 325,003 mineral acres (5.2%). Mineral acreage exceeds surface acreage because the mineral estate has been retained when lands were sold.

The Permanent Fund

Table T-5 shows the University System permanent fund balances from FY 2008 to FY 2012 by trust. The balance at the end of FY 2012 was $25,896,380.

Table T-6
University System Revenues by Trust FY 2012

Distributable Revenues Trust	Gross Distributable Revenues	Earnings Reserves	Trust Admin Account	Net Distributable Revenues
The University of Montana	$248,078	$0	$30,587	$217,491
MSU - Morrill Grant [1]	593,252	0		593,252
MSU - Second Grant	1,230,534	0	365,684	864,850
Montana Tech	1,584,573	99,922	239,664	1,244,987
State Normal School	907,592	44,000	246,185	617,407
Total	**$4,564,029**	**$143,922**	**$882,120**	**$3,537,987**

Nondistributable Revenues Trust	Gross Nondistributable Revenues	Net Nondistributable Revenues	Permanent Fund Balance
The University of Montana	$584	$584	$1,526,091
MSU - Morrill Grant	93,298	93,298	4,109,885
MSU - Second Grant	33,019	33,019	8,907,480
Montana Tech	3,288	3,288	5,151,800
State Normal School	7,773	7,773	6,201,124
Total	$137,962	$137,962	$25,896,380
TOTALS	**$4,701,991**	**$3,675,949**	**$25,896,380**

(1) MSU Morrill Grant Administrative costs were transferred to the appropriation from fund 02297 per HB 19.

Table T-7
Gross Revenue Generated by Activity for the University System FY 2012

Activity	FY 2008	FY 2009	FY 2010	FY 2011	FY2012
Agriculture & Grazing Management					
Grazing Leases	$321,074	$316,418	$284,752	$294,310	$363,779
Agriculture Leases	356,786	380,938	345,177	408,739	449,387
Totals	**677,860**	**697,356**	**629,929**	**703,049**	**813,166**
Recreational Use					
General Licenses	3,931	3,748	2,754	4,300	4,717
Conservation Licenses	41,335	42,348	40,998	38,224	39,669
Special Recreation Use Licenses	0	0	3,149	6,503	7,388
Totals	**45,266**	**46,096**	**46,901**	**49,027**	**51,774**
Forest Management					
Timber Sales	865,671	199,764	277,655	1,186,195	767,852
Forest Improvement Fees	119,981	56,888	114,360	100,991	162,044
Totals	**985,652**	**256,652**	**392,015**	**1,287,186**	**929,896**
Minerals Management					
Oil & Gas Revenues					
Rentals/Bonuses/Penalties	153,763	326,297	209,216	185,877	316,201
Royalties	60,348	61,861	35,244	42,549	16,680
Aggregate Minerals					
Rentals/Bonuses	0	0	0	0	0
Royalties	0	6,589	5,685	6,268	9,850
Other Minerals					
Rentals/Penalties	15,201	0	0	0	0
Other	730	248	750	0	0
Totals	**230,042**	**394,995**	**250,895**	**234,694**	**342,731**
Real Estate Management					
Rights-of-way/Easements	140,268	4,543	118,631	58,198	111,431
Residential Leases/Licenses	903,933	984,510	1,050,517	1,047,575	1,147,064
Land Sales	0	0	0	247,400	540,000
Other Leases/Licenses	160,587	164,205	188,134	204,367	192,168
Totals	**1,204,788**	**1,153,258**	**1,357,282**	**1,557,540**	**1,990,663**
Other					
Trust and Legacy Interest	1,459,243	1,310,557	1,318,357	1,273,619	1,271,634
Other Revenues	1,800	1,866	3,069	3,261	4,695
Totals	**1,461,043**	**1,312,423**	**1,321,426**	**1,276,880**	**1,276,329**
TOTALS	**$4,604,651**	**$3,860,780**	**$3,998,448**	**$5,108,376**	**$5,404,559**

Distribution of Revenues

Table T-6 shows the distributable and nondistributable interest and income for each of the University System trust beneficiaries. In FY 2012, the division used a portion of trust land revenues to fund administrative appropriations. From the distributable receipts, a small percentage is used to fund the Trust Administration Account. The exception is the Montana State University Trust for the Morrill Grant, which does not fund administrative costs. These costs are paid by the General Fund. Net distributable revenues for FY 2012 totaled more than $3.5 million and net nondistributable revenues of approximately $138 thousand were deposited in the various permanent trusts.

Revenues

Total gross revenues generated by the division over the last five years are listed by activity in Table T-7. This table contains not only trust revenues, but Forest Improvement Fees and revenues generated to fund appropriations. During FY 2012, approximately $5.4 million was generated in gross revenues from land management activities and investment interest.

Web sites featured in this section:

www.dnrc.mt.gov/trust
www.dnrc.mt.gov/trust/mmb
www.dnrc.mt.gov/remb

Managing Montana's Water

The collection and processing of accurate streamflow information is central to many Water Resources Division (WRD) activities that benefit the people of Montana every day. Information on streamflow is critical for: 1) reservoir management; 2) water rights permitting; 3) water rights adjudication; 4) water allocation by court-appointed water commissioners; 5) maintaining minimum flows in streams; 6) water availability studies; 7) flood forecasting; 8) irrigation scheduling; and 9) floodplain and land-use management.

Dave Ammen, DNRC Water Measurement Program Manager, shutting down a seasonal streamgage on Mill Creek in the Yellowstone Basin as winter sets in. Photo by Dave Poncin.

At the statewide level, the WRD, in partnership with the U.S. Geological Survey (USGS), supports the operation of 43 streamgages through the USGS Cooperative Water Program. Gages in this network are located on the state's mainstem rivers or on significant tributaries. Montanans benefit from this partnership in a number of ways. Data collection, analysis, and quality assurance procedures at USGS gages adhere to strict national protocols. As a result, flows are directly comparable across local, State, regional and national levels. Hydrologic information collected by USGS is universally accepted as reliable and accurate. Many of the gages have a long period of record critical to capturing the year-to-year and cyclical variability of wet periods, drought, and for capturing extreme hydrologic years and events, such as occurred in 2011. In addition, a majority of these streamgages record and transmit data in real time allowing up-to-the-minute flow data accessibility for decision making by any Montanan with an internet connection. The web site lists current streamflow information from 209 USGS gaging sites in Montana at http://waterdata.usgs.gov/mt/nwis/current/?type=flow.

The WRD also maintains a network of 92 flow-monitoring gages on streams and canals throughout the state. Information gathered from these gages is used to support distribution of water released from state reservoirs, maintaining minimum flows on streams subject to dewatering, assistance to local water users, or hydrologic studies related to the WRD's mission of promoting and coordinating the wise use and conservation of Montana's water resources for current and future generations. Gages in this network are operated and maintained by WRD staff with some assistance from local cooperators. While most of the gages operate seasonally, some are maintained year round. Five of the network gages record and transmit data in real time while the remainder require field downloading and office processing before data release.

Water Resources Division

Providing the most benefit, through the best use, of the state's water resources for the people of Montana.

The Montana Constitution affirms that the state's water resources are owned by the State of Montana and are to be used by its people. The DNRC has statutory responsibility to ensure that the state's water resources are managed to meet existing and future needs of its citizens.

The Water Resources Division (WRD) is comprised of five bureaus–the State Water Projects, Water Management, Water Operations, Water Rights, and Water Adjudication bureaus–along with four regional and four unit offices. The division has approximately 164 employees, with staff in the Helena central office and regional offices in Billings, Helena, Lewistown, and Kalispell and unit offices in Bozeman, Glasgow, Havre, and Missoula.

Further information about the division and Montana water resources can be found on the division's web site at www.dnrc.mt.gov/wrd.

The draining of Frenchman Reservoir for repair of the irrigation outlet conduit and gate structure (2011). Photo by Marvin Cross, civil engineer specialist, Havre Office.

State Water Projects Bureau

The State Water Projects Bureau (SWPB) administers the operation, management, and rehabilitation of state-owned dams, canals, and hydropower projects under the purview of the DNRC Water Resources Division. A complete list of the projects, along with additional information, can be viewed on the DNRC Water Resources Division web site at www.dnrc.mt.gov/wrd/water_proj/. DNRC also provides professional engineering and rehabilitation assistance on 10 additional water projects owned by the Montana Department of Fish, Wildlife & Parks (DFWP). The SWPB markets water from the state-owned facilities primarily for irrigation and administers approximately 1,965 water-marketing contracts through local water user associations. The total combined volume of water marketed by the SWPB per year is approximately 308,000 acre-feet. Revenue from the water purchase contracts, leasing of lands associated with the projects, and net revenue from hydropower generation supplements funds for the rehabilitation of state water projects (see Tables W-1 and W-2). Debt repayment funds come from repayment contracts with water users. The SWPB ensures that projects are operated and maintained in a safe, efficient manner, are kept to current dam safety standards, and repayment contracts are properly administered.

Table W-1
Leases Associated with DNRC-Owned Water Projects

Cabin site	25	$ 39,192.63
Grazing	5	4,958.00
Totals	**30**	**$ 44,150.63**

Table W-2
CY 2011 Broadwater Missouri Power Project

Operating availability	99%
Net energy generation (kilowatt-hours)	53,535,992
Total revenue from sales	$4,443,384
Investment income	$11,979
Operating costs	($467,001)
Bond payments	($1,676,850)
Net Revenue	**$2,311,512**

Project Rehabilitation

The Project Rehabilitation Program identifies and corrects safety and operational deficiencies on state-owned water projects. A brief summary of new and ongoing repair and rehabilitation projects completed in FY 2012 includes:

- The Deadman's Basin Dam Gatehouse Replacement Project was awarded in July 2012. Construction is scheduled to begin in October 2012 and will be completed by December 2012.
- The Ruby River Dam Rehabilitation Project, Phase 1, was completed in 2012, Phase 1 of the project involved development of new maintenance access routes and replacement of the spillway. Phase 2, the rehabilitation of the outlet works, is planned for 2014, pending funding.
- The existing drain system was improved at the Martinsdale North Dam. The work included adding monitoring manholes and instrumentation to the toe drain system, as well as reconfiguring the right abutment horizontal drain system to allow for safe and accurate flow measurement. Automated reservoir level instrumentation was also installed to allow continual monitoring of the reservoir. The project was completed in June 2012.
- The walkway hand rail was replaced at Middle Creek Dam. The railing was damaged due to frost. The new railing was completed in July 2011.
- A failure mode analysis was completed for Cataract Dam in June 2012. The failure mode analysis is part of the ongoing effort to investigate the possibility of transferring the project to water users.

Reclamation and Development Grants Program

SWPB staff prepared Renewable Resource Grant and Loan applications for the installation of automated instrumentation and a weir replacement at Cooney Dam, and an infill drilling project for East Fork, Fred Burr, Martinsdale, and Middle Creek Dams.

The SWPB also administered and coordinated with a professional engineering firm to prepare a Reclamation and Development Grants Program application for replacement of the Deadman's Basin diversion dam near Shawmut in Wheatland County.

Seepage Monitoring

Seepage monitoring is required as a condition of the operating permits for all dams regulated by the Montana Dam Safety Program. Twenty-one DNRC dams are regulated under the program (see www.dnrc.mt.gov/wrd/water_proj), and most have monitoring wells installed. The SWPB is upgrading seepage monitoring data collection systems on DNRC's projects and, when possible, installing new systems. Automated instrumentation upgrades were installed at Middle Creek Dam in 2012 and Martinsdale Dam in 2012.

Repairs to existing electronic monitoring systems have increased the reliability of the daily automated measurements for reservoir storage at the East Fork of Rock Creek and Tongue River dams. These values can be seen at www.dnrc.mt.gov/wrd/water_proj/dam_pages.

At locations where these systems are not in place, measurements are taken by hand. The data are collected monthly, reviewed, and compared to historical trends.

Project Management

The Project Management Program administers operation of state-owned dams and canals and oversees repayment contracts with water user associations. The program also protects water rights for the projects and oversees disposal of projects no longer appropriate for state ownership.

Property Management

During the 1930s, numerous water conservation projects were constructed in Montana because the government needed to create employment opportunities and stabilize the agricultural economy. Over time, governmental involvement in some of these projects no longer provided

public benefits. These projects are slated for transfer to local water user associations, water districts, or private ownership. This program also administers the property assets of active water projects.

Canal Operations

The Canal Operations Program is responsible for identifying and correcting operational deficiencies on 250 miles of state-owned canals. Major activities accomplished in FY 2012 include:

- Rehabilitating and lining a portion of the Douglas Canal near Helmville in Powell County. The project eliminated seepage and reduced the potential for a catastrophic berm failure along a portion of canal near to Nevada Creek.
- Administering a professional survey firm to conduct a topographic survey of the Smith Creek Supply Canal near Augusta in Lewis and Clark County.
- Administering professional surveying firms to conduct surveys along the entire 11.5 mile Deadman's Basin Supply Canal near Shawmut in Wheatland County

Water Measurement and Water Right Activities

The SWPB is responsible for all water measurement and water right activities associated with state-owned water projects, including tabulation of annual discharge summaries for SWPB gaging stations for the water year (October 1 through September 30). In FY 2011, the bureau collected and recorded bimonthly reservoir storage data for 18 state-owned reservoir projects; presented monthly data to the Governor's Drought Advisory Committee; operated and maintained 34 permanent and two temporary stream- and canal-gaging stations associated with state projects; upgraded four permanent gauging stations with electronic data-recording equipment; and worked closely with water commissioners and ditch riders associated with state projects. Four new electronic canal and stream-gaging stations were installed and maintained. The staff also measured streamflows and maintained rating tables for staff gages on the four major tributaries immediately above Painted Rocks Reservoir. Bureau staff also continued consolidating and correcting water rights associated with state-owned water projects.

Hydropower

The Hydropower Program administers development and operation of hydropower facilities on state-owned water projects. To date, one hydropower facility, the Broadwater-Missouri Power Project near Toston, has been built. With a maximum capacity of 10 megawatts, the project began generating power in June 1989. DNRC owns and operates the facility and contracts with NorthWestern Energy to sell the energy. Earned revenues from the project are allocated to a fund that helps finance the rehabilitation of other SWPB water projects.

DNRC hydrologists discuss the importance of streamflow gaging with water commissioners in Big Timber. Photo by Brad Bennett.

Most of the water storage projects managed by the SWPB were completed in the late 1930s and early 1940s and have significant needs, such as foundation improvements, increased spillway capacity, or simply replacement of major components as a result of long-term structural deterioration. The earned revenue from Broadwater is critical for maintaining and repairing these structures so they meet current safety standards and codes. Table W-s on page 75 shows statistics concerning the Broadwater-Missouri Power Project during calendar year 2011.

The spring runoff of 2011 sustained high to very high river flows at the project from mid-May to mid-July. The high flows transported large daily quantities of debris and sediment into the project's intake area which was not completely cleared away until late August. The combination of high flows, debris, and sediment reduced power production to below normal levels. A scour hole in the left bank downstream from the tailwater bank protection and damage to the canal intake separation wall will require future repair work. Otherwise, operation and maintenance work remained near normal most of the year. Staff also continued work on hydropower feasibility studies for developing hydropower on other SWPB projects.

Water Management Bureau

Overview of the Water Management Bureau

The Water Management Bureau (WMB) conducts hydrologic assessments of Montana's surface water and groundwater resources, conducts water resource planning studies, and fosters stewardship of the state's water resources through diverse education programs. Activities and work products of the WMB support the conservation, development, and sustainable utilization of the state's water resources. In carrying out its duties, WMB staff frequently partner with local water users, watershed groups, conservation districts, other bureaus and divisions within DNRC, and other state and federal agencies. WMB staff includes seven hydrologists, four water resource planners, one economist, one education specialist, and a half-time administrative support position.

Hydrosciences Section

WMB's Hydrosciences Section provides scientific support to the Water Resources Division and other state and federal agencies. Data collection, problem analysis, and results support the resolution of complex surface water and groundwater development and management issues. Outcomes of these efforts may lead to development of new water resource policies, guidelines, and rules that improve water management.

Water Resource Planning Section

WMB's Water Resource Planning Section provides focused research, planning, and project coordination that supports WRD and the water management efforts of other state and federal agencies. In addition, section staff initiates and develops new water resource policies aimed at ensuring that Montana's water is efficiently managed and protected for the benefit of all Montanans.

Montana Watercourse

Montana Watercourse (MTWC) provides hands-on, dynamic, water education through a series of diverse programs that target all levels of water users—kids through adults. Using practical, unbiased, legal and scientific information, MTWC educates Montanans on basic water facts, water problems, and their solutions. (http://mtwatercourse.org).

During FY 2012, MTWC conducted or supported over 53 workshops, conferences, training, and outreach events that reached approximately 2,300 participants, and included 3,425 hours of volunteer time. These grants funded education programs focused on the following areas: water rights trainings, dam owner workshops; storm water conference, Project WET curriculum training, river clean-up projects, and wetland and water festivals. Funding for these programs is provided through 7 grants from DNRC, the Department of Environmental Quality, and the Environmental Protection Agency.

FY12 2012 Activities of the Water Management Bureau

Highlights of Statewide Activities

Montana Water Supply Initiative

The Montana Water Supply Initiative is WMB's effort to develop a statewide water resource planning process in accordance with §85-1-101 and §85-1-203 of the Montana Water Use Act.

FY 2012 activities included conducting an inventory of resources and water information necessary for water planning and reviewing past state water planning activities. With this understanding, WMB is identifying water data information, technical investigation tools, and expertise needed to assist basin councils with preparation of basin plans under this initiative. Outcomes of the Montana Water Supply Initiative include: 1) documentation of current uses and demands for water in the Clark Fork, Yellowstone, and Missouri River Basins; 2) project changes in demand for water over the next 20 years; and 3) identification of water sources to meet potential changes in demand while protecting existing beneficial uses.

Drought Mitigation and Planning

In FY 2012, WMB personnel supported the following activities of the Governor's Drought Advisory Committee:

1) assisting the committee with assessing the full range of water supply and moisture conditions monthly, year-round, and summarizing its findings with the new Montana Water Supply and Moisture Status by County map (http://nris.mt.gov/Drought/status/);
2) assisting Committee with soliciting monthly crop and moisture condition reports from county extension agents; and
3) drafting the Governor's Report on the Potential for Drought 2012. The committee continues to encourage Montanans to dedicate more resources to prepare for periods of high climate variability.

Water Commissioner Training

In FY 2012 WMB staff conducted water commissioner training in Helena for approximately 40 court-appointed water commissioners, prospective water commissioners, ditch riders, and DNRC personnel. In addition, WMB

DNRC hydrologist demonstrating water measurement to water commissioners in Miles City. Photo by Chuck Dalby.

staff periodically provided technical support to individual water commissioners, water users, and other government employees with water measurement and allocation training.

Support to other Bureaus, Divisions, or Departments

WMB staff provided expert advice and technical support to the department in the following areas:

- Development of new methods for determining diverted volume as part of reforming the water right application process;
- Technical evaluation of beneficial use permit, water right change, and controlled groundwater applications;
- Providing written and oral testimony on contested water right case hearings;
- Policy and legislative initiatives on water resource issues;
- Negotiation and litigation of interstate and international water treaties, compacts, and water agreements between Canada and adjacent states;
- Training on water measurement techniques and stage-discharge relationships to hydrospecialist and new appropriations staff in the Water Resources Division's regional offices; and
- Assisting with feasibility studies and consulting on water right valuation studies.

Education/Training/Outreach

MTWC coordinated and led the following education and professional development opportunities statewide:

- Montana Storm Water Conference 2012: Weathering the Storm–a three-day conference in Kalispell and attended by Montana and national professionals.
- Yellowstone Lake Geo-ecology Graduate Course: MTWC provided scholarships and lead instruction for this graduate course through MSU's Master of Science in Science Education course to Montana teachers and others.
- 14th Annual Water Summit: An annual event for high school students and teachers. This year's Summit was in Billings and focused on the science and function of wetland and riparian areas.
- Montana Natural Resources Youth Camp: MTWC assisted in developing and leading this week- long camp that introduces conservation leadership to youth throughout the state.
- Montana Water Resources Online Realtor Course: This course was offered twice during FY 2013 for realtors throughout Montana.

Floods of 2012

WMB staff participated in activities related to monitoring, responding to, and assessing the Flood of 2012. Activities included: 1) consulting with the Lewistown Regional Office and Montana Congressional offices on economic aspects of flooding in the Musselshell Basin; 2) monitoring Army Corps of Engineers operations and response activities in the Missouri Basin; and 3) serving on the Corps' Missouri River Flood Task Force.

Montana Watershed Coordination Council

The WMB continued supporting the Montana Watershed Coordination Council's (MWCC) efforts to strengthen and unite watershed communities and natural resource agencies across Montana. MWCC works to improve coordination, communication, and efficient delivery of water resource information and activities by serving as a statewide forum connecting state and federal agencies and conservation organizations to locally led watershed groups. FY 2012 was also the inaugural year of the Big Sky Watershed Corps (BSWC), a watershed-based AmeriCorps program with members working on water and watershed health in 10 host watersheds.

Highlights of Clark Fork Basin Activities

Support of Local Watershed Groups

WMB personnel assisted the Clark Fork Task Force and Upper Clark Fork Steering Committee with water-management planning in the Clark Fork Basin. The task force is working to update its 2004 Watershed Management Plan and integrate it into a basin plan as part of the Montana Water Supply Initiative. In addition, Planning Section staff assisted the Task Force with

organizing the fall 2011 and spring 2012 Clark Fork Water Supply Conference at UM. WMB hydrologists also provided assistance to the Blackfoot Challenge's Drought Committee through collection and interpretation of stream-flow data which provides the committee information required for determining when drought conditions are prevalent on the river.

Support to other Bureaus, Divisions, or Departments

The Water Resources Division administrator and staff from Water Management, Water Rights and Adjudication bureaus met with representatives from Montana Bureau of Mines and Geology and the Montana Mining Association to discuss water right issues encountered as mining projects expand and new projects are pursued.

WMB staff advised DNRC leadership and the Reserved Water Rights Compact Commission staff on portions of Confederated Salish and Kootenai Tribes Compact negotiations related to off-reservation water use. WMB involvement included: 1) estimating demand for mitigation water; 2) researching potential administrative models; 3) commenting on off-reservation water supply proposals; and 4) discussing factors pertaining to a potential mitigation water market and to the valuation of a volume of water made available through a compact.

In addition, WMB staff consulted with the Montana's Natural Resource Damage Program on a proposal to purchase a water right on Racetrack Creek and advised DNRC on the proposed transaction.

Education/Training/Outreach

MTWC coordinated and led the following education, outreach, and professional development events:

- Volunteer Water Monitoring Training for teachers from Kalispell Middle School.
- Supported American River Clean-up projects in three communities.
- Provided funding support for two camps that served youth in the Flathead.
- Provided outreach to the Flathead Lakers in developing education materials.

Other Activities

WMB personnel provided technical information, research, and advice on issues associated with operation of the Columbia River system and effects of federal decisions on reservoir levels and streamflows in western Montana to DNRC leadership and interested citizen groups such as the Clark Fork Task Force.

Hydrologist Training. Photo by Mike Roberts

Highlights of Yellowstone Basin Activities

Support of Local Watershed Groups

WMB personnel provided technical assistance and advice to the Yellowstone River Conservation Districts Council (YRCDC) in support of the Yellowstone River Cumulative Effects Study (CES). The purpose of the CES is to determine the cumulative effects of human development on the long-term sustainability of the Yellowstone River ecosystem. As a member of the YRCDC Technical Advisory Committee, WMB personnel are responsible for the management and oversight of the hydrology, hydraulic (floodplain), geomorphology, and information management work plans. The CES is scheduled for completion by December 31, 2015.

Hydrological Studies

WMB personnel in collaboration with staff from the Billings Regional Office continued work on the Pryor Creek Flow Monitoring and Measurement Study. The purpose of this study is to determine the low flow hydrologic conditions on Pryor Creek to verify the feasibility of restoring late season flows in lower Pryor Creek. FY 2012 activities included reinstalling two monitoring stations damaged by flooding in 2011. Flow monitoring by Billings Regional Office staff continued during summer 2012.

Support to other Bureaus, Divisions, or Departments

WMB staff provided support to the Billings Water Resources Regional Office in the following areas: 1) training and support to hydrologist/water resource specialist staff on procedures for reviewing applications for beneficial use of groundwater; 2) identification of stream reaches affected by proposed groundwater wells

and appropriate methods for accounting for depletions in legal availability and adverse effect analyses; and 3) drafting rules for the Horse Creek Controlled Groundwater Area including establishing methodology for curtailing use of new wells when spring precipitation is low.

Education/Training/Outreach

The MTWC coordinated and led water rights workshops in Petroleum and Park counties and a dam owner workshop in Harlowton. WMB staff provided hands-on training to personnel from a local ditch company and the Billings Regional Office on stream discharge measurement theory and use of the Sonteck ADV Flowtracker.

Yellowstone River Compact Litigation

WMB personnel provided technical and staff support to the Montana attorney general for litigation with

Wyoming over violations of the Yellowstone River Compact. In 2007, the attorney general's office, in cooperation with DNRC, filed a complaint with the U.S. Supreme Court seeking enforcement of compact provisions and alleged four Wyoming activities that may violate the Compact if they deplete the water supply necessary to satisfy pre-1950 uses in Montana.

After reviewing Montana's claims, the special master appointed by the court supported Montana's interpretation on three of the four complaints. In January 2012 the court heard oral arguments on Montana's remaining complaint that conversion from flood to sprinkler irrigation and new consumption of water on pre-1950 irrigated acreage violated the compact. On this claim the court supported Wyoming's position that conversion from flood to sprinkler irrigation on Wyoming's pre-1950 acres was allowable under the Compact.

WMB personnel are assisting the attorney general's office and outside experts with discovery and interrogatory phases of litigation and in preparing expert reports and analysis in support of a trial in 2013.

Highlights of Upper Missouri River Basin Activities

Support of Local Watershed Groups

WMB staff provided technical support to the Big Hole Grayling Candidate Conservation Agreement with Assurances (CCAA) project. DNRC, in partnership with landowners, Montana Fish Wildlife & Parks, NRCS, and FWS, developed 14 site-specific plans (four pending final approval) to address conservation issues including

Mike Roberts, DNRC hydrologist, discusses infrastructure improvements and irrigation efficiency with a rancher enrolled in the Big Hole CCAA project. Photo by Emma Cayer, FWP.

water measurement, irrigation efficiency, and instream flows. Over 25,000 acres and 1,000 cfs in water rights are included in these plans. WMB hydrologists assist with streamflow gaging, measuring device installation, water rights assessment, and authoring and negotiating flow agreements and irrigation strategies incorporated in site-specific plans. In addition, WMB staff provided technical advice for a pilot payment for ecosystems services conservation incentive program in the Big Hole watershed.

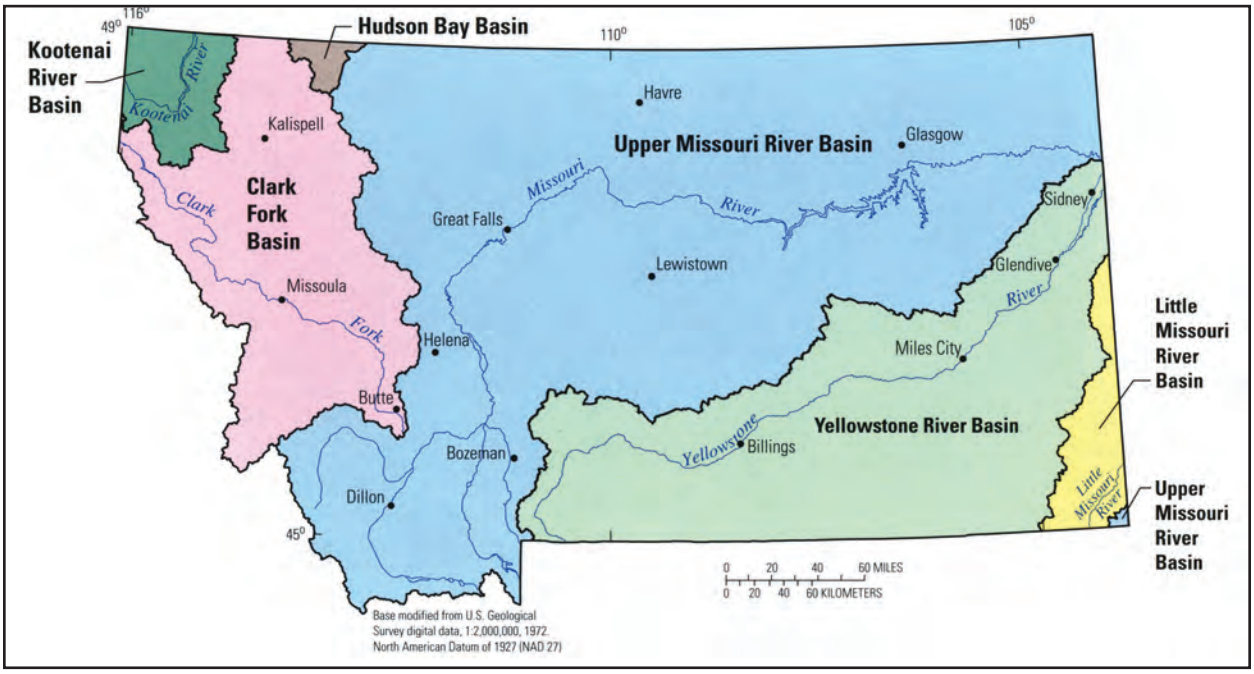
WMB worked with Ruby, Madison, Upper Tenmile, and Sun River watershed groups in the Upper Missouri on water management activities. Specific activities include: 1) assisting the Ruby Watershed Council with development of a volunteer water-monitoring program for the Ruby watershed; 2) assisting with an irrigation conservation project in the Madison, and 3) assisting the Sun River Watershed Group with streamflow monitoring and reporting.

Support to other Bureaus, Divisions, or Departments

WMB personnel supported the Water Rights Bureau and the Bozeman and Helena regional offices in reviewing applications for beneficial use of groundwater. WMB staff provided expert review on evaluating the potential for new groundwater uses to deplete surface water as well as surface water mitigation and aquifer recharge plans.

WMB staff also provided support to the Water Projects Bureau for analyses related to the Ruby, Deadman's Basin, and Cataract projects and to the RWRCC for compact negotiations with BLM regarding the Upper Missouri River Breaks National Monument.

Figure W-2
USGS Montana Stream Basin Map



Education/Training/Outreach

The MTWC coordinated and led the following education, outreach, and professional development events:

- Water Rights Workshops for Beaverhead and Broadwater counties.
- Participated in three water-related festivals that focused on farm and/or water issues.
- Provided support and leadership for three water quality monitoring trainings.
- Provided support and/or leadership for three river clean-ups and weed pulls.
- Led a class for middle school students through the MSU program Peaks, and Potentials Camp.

Highlights of Lower Missouri River Basin Activities

Support of Local Watershed Groups

The WMB hydrologist partnered with the Teton River Watershed Group and the local Montana FWP fisheries biologist to monitor streamflows in the Teton River. The objective of the partnership is to develop a water balance for the Teton River by collecting streamflow data at multiple locations throughout the basin. WMB staff also met with the local water commissioner on several occasions to discuss measuring devices in local ditches and water rights in the area.

Hydrological Studies

The waters of the St. Mary and Milk rivers are shared between the United States and Canada and apportioned under Article IV of the 1909 Boundary Waters Treaty and the 1921 Order of the International Joint Commission (IJC). WMB staff participated in two hydrologic studies aimed at ensuring Montana irrigators receive their share of St. Mary and Milk River water and improving water management in the Milk River Basin.

St. Mary and Milk River Basin Study: In June 2012, WMB and the USBR released the St. Mary and Milk River Basin Study initiated under USBR's WaterSMART Program. Work completed under the basin study included developing a daily time-step computer simulation model of the St. Mary and Milk River system. The study accessed present and future water needs in the St. Mary River and Milk River basins, and the simulation model was used to analyze how the existing infrastructure would perform when trying to meet future demands. The simulation model also was used to analyze infrastructure and operational alternatives that could lessen future water shortages.

Milk River Natural Flows Investigation: The "natural" flow of the Milk River upstream from the international boundary near Havre is apportioned between the United States and Canada. Accurate accounting of Milk River

natural flow, and the amounts of that natural flow used by each country, requires a realistic estimate of the water used by Montana and Alberta irrigators. Current apportionment procedures overestimate Montana water use and underestimate the amount of water used by Milk River irrigators in Alberta. WMB is working with irrigators in Montana to better quantify and monitor their water use. WMB also is working with the USGS, Environment Canada, Alberta Environment, and the IJC to more accurately account for the water use by Alberta irrigators.

Support to other Bureaus, Divisions, or Departments

WMB personnel worked with the Water Rights Bureau to develop a procedure for evaluating beneficial use applications for groundwater wells in the Madison aquifer. The purpose of this effort is to identify areas where DNRC has determined that pumping groundwater from the Madison group aquifer is unlikely to deplete surface water subject to prior appropriation. The WMB also supported the RWRCC on groundwater issues related to negotiations on the reserved water right compact for the Charles M. Russell National Wildlife Refuge.

Other Activities

WMB personnel took part in the International Records Meeting and actively monitored the international apportionment procedures for the distribution of water in the St. Mary, Milk, and East Poplar rivers between the U.S. and Canada. WMB hydrology staff coordinated activities with the USGS, Saskatchewan and Environment Canada to ensure that Montana receives its share of the flow of the East Poplar River in accordance with the IJC's recommended apportionment.

WMB staff administered grants and contracts to maintain and improve water supplies in Montana's Milk River Basin. Funded projects include investigations related to the proposed St. Mary Rehabilitation Project and an investigation of the feasibility of storing additional water on Frenchman Creek.

WMB personnel continued to support department leadership's efforts related to the Army Corps of Engineers' management of the Missouri River mainstem reservoir system. Activities included: 1) advising on system management issues; 2) assessing developments related to policies of the Corps governing the supply of system water for various water uses; 3) serving on the Technical Committee for the Missouri River Association of States and Tribes (www.mo-rast.org/) ; 4) serving on the Missouri River Recovery Implementation Committee (www.mrric.org); and 5) serving on the Missouri River Ecosystem Restoration Plan (www.moriverrecovery.org) Cooperative Agency Team.

Newlan Creek Dam, Meagher County. DNRC file photo.

Water Operations Bureau

The Water Operations Bureau administers the Dam Safety, Floodplain Management, and Water Measurement programs and provides staff support for the Board of Water Well Contractors.

Dam Safety Program

The primary purpose of the Dam Safety Program is to ensure that dams with the potential to cause loss of life downstream are properly constructed, maintained, and operated. An operation permit is issued for dams that meet state dam safety standards. Eighty-eight dams in the state are permitted. The Dam Safety Program regulates an additional 2,793 dams where a permit is not required, but action is required if danger to life or property exists. To obtain or renew an operation permit, the high hazard dam owner must review and update the dam's emergency action, operation, and maintenance procedures and a professional engineer must conduct an inspection. The Dam Safety Program issued 39 operation permits in FY 2012.

On a permitted dam, construction that could potentially threaten the dam's integrity requires a construction permit. The following dams had active construction permits for FY 2012: Kerns Lake (Powell County), Deadman's Basin (Wheatland County), Ruby (Madison County), Eureka Dam (Teton County), Smith Lake Dam (Flathead County), Crisafulli Dam (Dawson County), Northern Pacific Reservoir Dam (Lewis and Clark County), Martinsdale North Dam (Wheatland County) and Twin Bridges

Wastewater Lagoon (Beaverhead County).

When a new dam is constructed or an existing dam repaired, the owner must apply for a hazard classification. A hazard classification is a determination of the potential for loss of life downstream due to dam failure. Twenty-three hazard analyses were completed in FY 2012.

Education and public awareness are priorities for the Dam Safety Program. Staff assisted with two-day educational workshops for dam owners in October 2012 through the Montana Association of Dam and Canal Systems. The Dam Safety Program continues to assist dam owners and local county officials with updating and testing emergency action plans. New in 2012 is an educational program targeted toward training rural dam owners how to inspect and maintain their dams. Montana WaterCourse has been hired to implement this program. One workshop was held in May 2012 in Wheatland County.

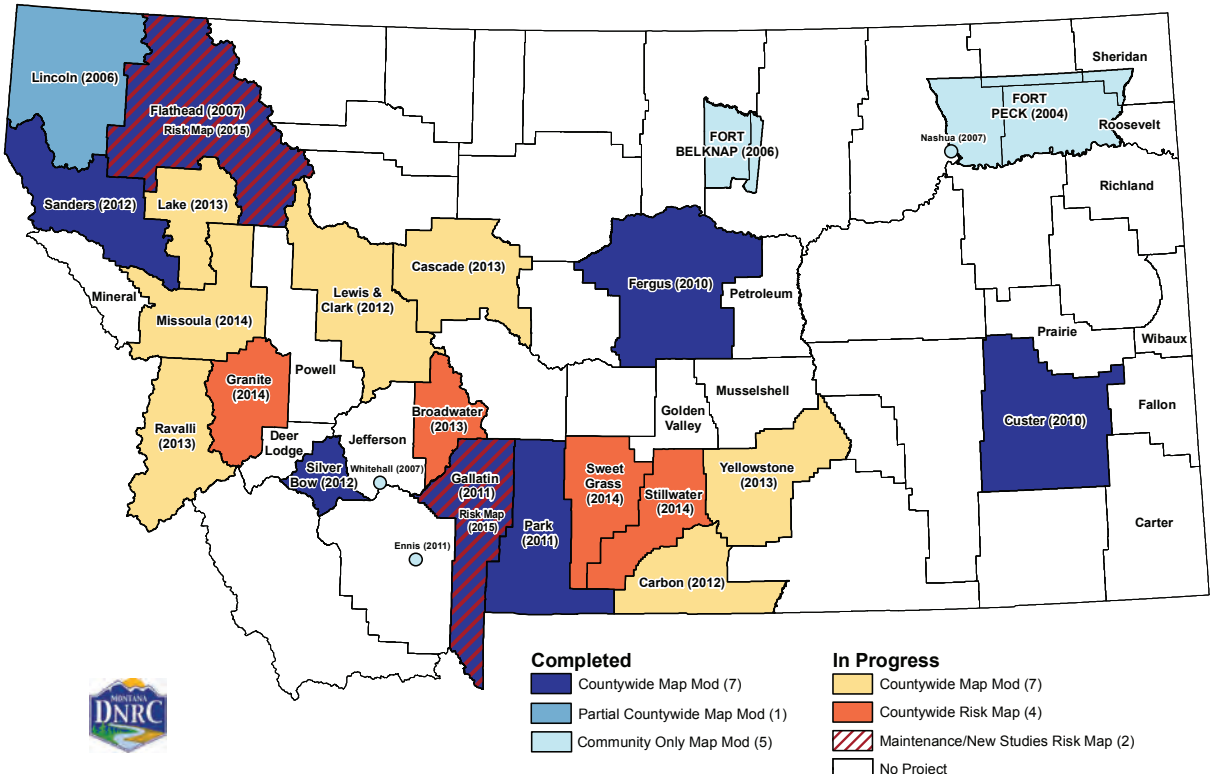
2012 Floodplain training. DNRC file photo.

Floodplain Management Program

Outreach and Training

Managing development in flood prone areas and making flood insurance available reduces hardships when flooding occurs. Recovering from the damages of the 2011 flooding disaster would have been more difficult, were it not for previous management of flood prone areas. This type of management is conducted by 130 Montana communities including counties, municipalities, and tribes that participate in the National Flood Insurance Program (NFIP). The Montana DNRC Floodplain Management Program works with these communities, ensuring that communities are meeting legal requirements mandated by federal and state law. The following bullet items highlight work being accomplished in the state office with communities to lessen flooding hardships:

Figure W-2
Montana Floodplain Mapping Status of FEMA Map Modernization and Risk MAP Program Projects



- Through a multiagency collaborative effort, a revised floodplain management model ordinance was drafted and made available to local communities for adoption;
- Conducted over 46 visits to local communities;
- Conducted over 500 calls and/or emails to local communities;
- Distributed six Montana floodplain newsletters to over 400 recipients;
- Conducted over 25 presentations to various conferences, workshops, and webinars;
- Continued to work on 2011 flood events and recovery efforts;
- Coordinated annual flood awareness events with Flathead and Lewis and Clark counties and Miles City;
- Assisted with coordination, planning, and successful implementation of the 13th and 14th annual conferences for the Association of Montana Floodplain Managers;
- Reviewed over 40 local ordinances for compliance;
- Planned and conducted the 3rd and 4th Annual Montana Floodplain Resource Seminar which provides free training for community officials and floodplain professionals;
- Continue to strengthen local community relationships effectively, in part through participation at the Montana Association of Counties and the Montana League of Cities and Towns annual conferences;
- Initiated a multiagency charter to collaborate on reducing flood losses through newly developed Montana Silver Jackets program sponsored by the U.S. Army Corps of Engineers.
- Updated and maintain Montana Floodplain Website – www.mtfloodplain.mt.gov;
- Developing online training modules for local communities;
- Produced an educational 2011 flood photo album;
- Implemented formal floodplain training program;
- Develop and maintain an interactive Montana NFIP participation map.

Additional and often more technical work is accomplished by the state's six water resources regional engineering specialists who work out of Kalispell, Missoula, Helena, Lewistown, Havre, and Billings. In FY 2012 they:

- Reviewed over 200 floodplain applications for communities;
- Conducted over 150 site visits;
- Reviewed more than 40 subdivision proposals for communities; and
- Addressed over 500 miscellaneous floodplain issues from around the state.

Floodplain Program – Flood Risk Mapping Unit

For the past seven years, the DNRC has actively partnered with FEMA to modernize Flood Insurance Rate Maps (FIRMs). The federally funded "Map Modernization Program," was a five-year initiative established by Congress in 2004. The focus of the program was to digitize existing paper FIRMs and when additional funding was available, to perform new floodplain mapping studies. While the Map Modernization (Map Mod) Program officially ended in 2009, many of the projects are still in progress as they typically take from three to five years to complete. Status of all the Map Modernization projects is listed below (with year completed or estimated completion), and displayed in Figure W-2.

- Completed seven Countywide Map Mod projects: Flathead* (2007), Custer (2010), Fergus* (2010), Park (2011), Gallatin (2011), Butte-Silver Bow, and Sanders* (2012)
- Seven (7) In-Progress Countywide Map Mod projects: Lewis and Clark* (2012), Cascade* (2013), Carbon (2012), Lake* (2013), Ravalli (2013), Yellowstone* (2013), and Missoula* (2014)
- Completed six community or partial Countywide Map Mod projects: Fort Peck Indian Reservation (2004), Fort Belknap Indian Reservation (2006), Lincoln County (2006), Town of Whitehall (2007), Town of Nashua (2007), and Town of Ennis (2011).

With the end of the Map Modernization Program, FEMA converted the program to a new brand in 2010 called "Risk MAP" (Risk Mapping, Assessment, and Planning). Although this program continued the effort of converting paper maps to digital format, it was designed with a broader focus of community engagement, mitigation planning, risk assessment, and generating new non-regulatory mapping products.

Several of the Map Modernization projects (denoted by *) have been administered by the state through the Cooperating Technical Partners (CTP) Program, which means that FEMA obligates the grant funds directly to the DNRC. Over the last seven years, DNRC has received approximately $1-to-2 million a year in funding for community conversions and new floodplain mapping studies. Under both the Map Modernization and RiskMAP programs, FEMA has provided the funding for a full-time Flood Risk Map program coordinator staff position and a

half-time community outreach position. The Flood Risk Map Program Coordinator manages the grants, contracts, and mapping projects, and serves as the state liaison with FEMA. The community outreach position assists the Flood Risk Map Program coordinator and FEMA with program-related outreach, such as meetings with the community when new maps are released, ongoing project status communications with communities, and public information on the Map Moderization/RiskMap programs. The state contracts the majority of the project work; however some of the hydrologic and hydraulic analysis for new floodplain studies is completed in-house by the state floodplain engineer.

DNRC continues to partner with FEMA by defining the need for and administering new countywide floodplain mapping projects, along with returning to previously completed counties to perform new studies and/or rectify mapping deficiencies (referred to as map maintenance projects). It is estimated that roughly 10,000 miles of the state's 200,000 miles of rivers and streams have regulatory mapped floodplains. Mapping priorities and needs are assessed annually and documented in the program's business plan and "unmet floodplain mapping needs list." As a successful partner, DNRC administers all FEMA new mapping projects and continues to build in-house mapping expertise by completing some of the new studies, such as in Broadwater and Flathead counties. A summary of the state's ongoing projects are listed below, with estimated completion:

- Four in-progress Countywide RiskMAP projects: Broadwater (2013), Stillwater (2014), Sweet Grass (2014), and Granite (2014)
- One in-progress Maintenance RiskMAP project: Flathead County (2015); and
- Initiating a new maintenance project in Gallatin County to re-study Bozeman Creek and tributaries (2015).

The DNRC floodplain mapping program includes additional projects and initiatives, in addition to those of FEMA's Map Mod or RiskMAP projects, which are overseen by the state floodplain engineer. A brief summary of these projects and initiatives are listed below:

- Flathead Valley LiDAR collection project (completed 2010) – provided new topography with 2-foot contour intervals for an area of 450 square miles in Flathead and Lake counties;
- Floodplain reference maps (2013) – developed map template and completed 28 counties to date;
- Big Hole River Approximate Study Project (2013) – coordinating and administering new approximate level mapping for 116 miles of the Big Hole River;
- Ongoing development of state floodplain mapping guidelines and standards;
- Floodplain training and outreach aimed at engineering, surveying, and GIS professionals; and
- State technical review and designation/adoption of new and altered regulatory floodplains and floodways in accordance with the state rules and statutes.

Water Measurement

The Water Measurement Program provides technical assistance in measurement of streams and surface water diversions, focusing on streams with significant user conflicts or impacted resources. The program continues measuring device consultation for Mill Creek, Prickly Pear Creek, and the Big Hole River, and recently added Wise River. The program also interpreted water supply, snowpack, and climate forecasts for the Big Hole Watershed Committee, Flint Creek Dam Committee, Mill Creek Sub-committee, and other groups. The program consulted with and assisted efforts by the WMB, DFWP, and Lewis and Clark County Water Quality Protection District.

Modeling of Georgetown Lake Dam operation scenarios continued, based on water availability forecasts and hydrologic data. The program operated and maintained streamflow stations and monitored snowpack to assist Granite County in achieving reservoir management goals, which balance lake fisheries with irrigation water availability, and Flint Creek instream flows and fisheries.

The program conducted a field assessment and calculation of diversions from South Boulder River, in support of the District Court-appointed water commissioner. This effort resulted in better local knowledge and cooperation with regard to local water measurement and management efforts.

The program operated and maintained streamflow stations on Prickly Pear and Tenmile creeks, assisting the Lake Helena Watershed Group in TMDL quantification and improvements to instream flow.

The program installed and continues to monitor gaging stations in the Wise River in efforts to improve local water management practices and document recent water diversion improvements. Program staff processed grant applications for water measurement devices in the Wise River watershed and consulted on a Wise River infrastructure assessment.

Requests have increased for technical assistance regarding measuring device installation. Although grant funds are available, these funds will probably be quickly depleted.

Board of Water Well Contractors

The Board of Water Well Contractors licenses water well drillers and water well contractors and monitors well constructors. The board also establishes and enforces minimum water well and monitoring well construction standards. Comprised of five members, the board includes one technical advisor/hydrogeologist appointed by the Montana Bureau of Mines and Geology (MBMG), two licensed Montana water well contractors appointed by the governor, one member appointed by the DNRC director, and one member appointed by the DEQ director. Each member serves a three-year term.

Licensing

During FY 2012, 256 people were licensed in three categories: 135 water well contractors, 67 monitoring well constructors, 35 water well drillers, and 19 on inactive status. Twelve new licenses were issued: two water well constructors, one water well drillers, eight monitoring well constructors. Seventeen licenses were revoked for non-renewal.

Complaints and Investigations

During FY 2012, 17 complaint calls were received five were filed formally in written form. Of those five formal complaints; four were settled before going before the board, and one decision of the board favored the complainant.

Public Awareness/Education

The board recommended training classes for the Montana Water Well Drillers Association's winter conference. The board purchased and showed a video on the Chilean mine rescue where various drilling techniques were used. The board also visited drillers at projects throughout Montana. A newsletter, *Well Developments*, is also published and distributed to license holders and others interested. Information for property owners about wells and water well drilling regulations is maintained on the board's web site and distributed through county health offices and DNRC regional offices. The board also responded to hundreds of telephone requests by the public for information on water well and groundwater issues.

Water Rights Bureau

The mission of the Water Rights Bureau is to ensure the orderly appropriation and beneficial use of Montana's waters. The Water Resources Division was reorganized in 2007. The Adjudication Program was separated from the Water Rights Bureau and a Water Adjudication Bureau was formed. The Water Rights Bureau handles new appropriations, which involve administration and regulation of Montana's new water uses and changes to existing water rights that began after June 30, 1973. The bureau also establishes and administers controlled groundwater areas and basin closures established through Administrative Rules. In addition, the Water Rights Bureau carries out the Montana Constitutional directive to maintain a centralized water right record system.

Water Right Records

The main methods of accessing water right records by the public are through scanned images and microfiche. With the water right database information on the Natural Resource Information System (NRIS) web site http://nris.mt.gov/dnrc/waterrights, electronic records are the most popular form of access. Efforts continue to enhance the wide variety of water right information, forms, and data now available on the Internet at: www.dnrc.mt.gov/wrd.

Conversion of permanent records to scanned images served via the Web has greatly enhanced usefulness and accessibility. Conversion began in FY 2006. Of 394,000 water right files, approximately 73% have been converted to scanned images. Both water right record images and geographic representation of water right data are viewable at the NRIS site.

Geographic and Information Technology

Enhancements to the Oracle water right database continue to improve flexibility in information gathering and report generation, increase mapping capabilities, and improve customer access and service. An Enterprise GIS environment was created to merge GIS data with the water right database. Other database enhancements include a new water right application tracking system; a centralized mapping application for water right adjudication examination; a customized ArcMap tool that combines water right data, parcel data, and well information with direct links to their respective water rights abstracts, parcel CAMA reports, and well logs; integration of Department of Revenue (DOR) geocode information; a GIS web application to assist the Water Court with viewing and querying water right objections; and improved public access to water right information.

New Appropriations

Applications for various types of water rights are received each year. Table W-3 lists applications received during FY 2012. These water right applications vary in complexity depending on each region's water supply, area-specific competition for water, closed basins, and the specific project request. Staff in the division's eight regional offices process these applications.

Figure W-1
Basin Location and Adjudication Status, June 21, 2012

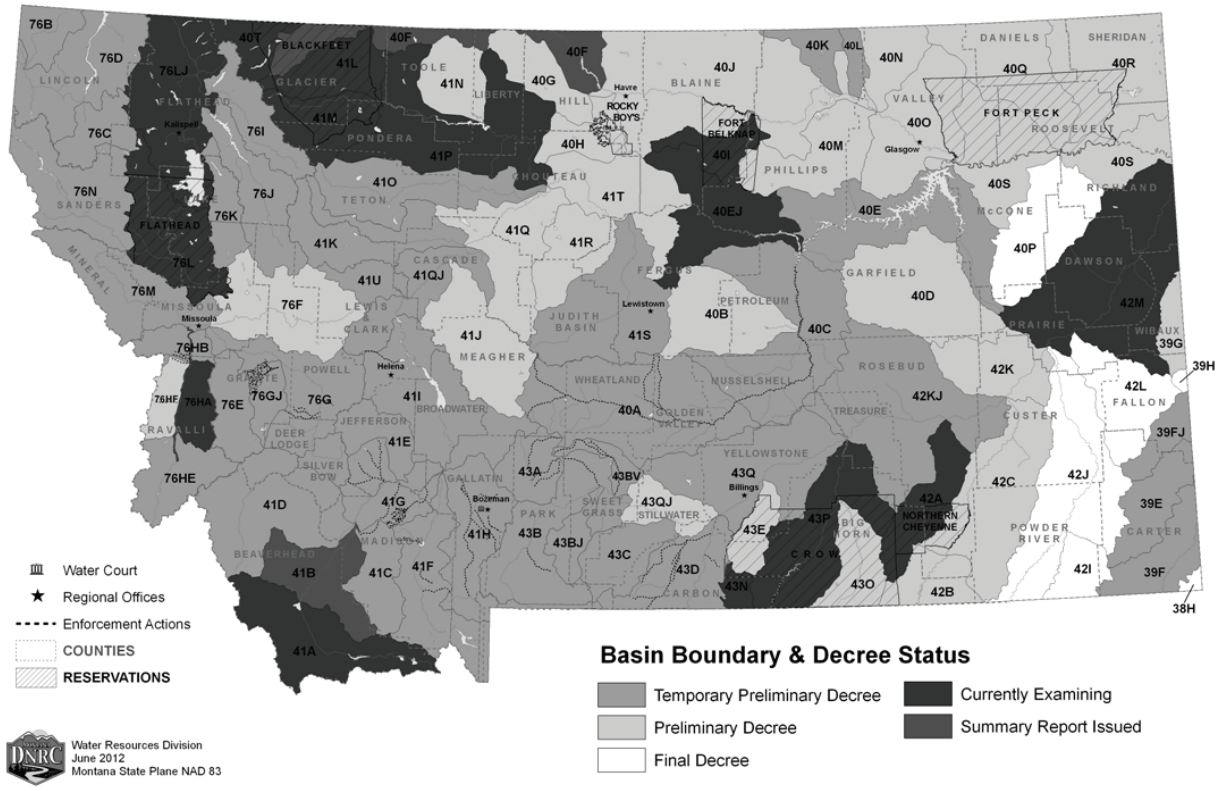


Table W-3
Water Right Applications in FY 2012

	Received	Processed
Permits	57	83
Changes	40	65
Groundwater certificates	1,657	1955
Replacement wells	17	17
Basin closure petitions	0	0
Stock water permits	57	81
Redundant wells	1	0
Extension of time	54	56
Project completion notices	85	0
Petition for groundwater closure	0	0

As a result of District Court decisions, the level of scrutiny given to permit and change applications has increased. Public concern continues for environmental review, groundwater-surface water connectivity, drought, complexity of dealing with limits to water availability, and the need to avoid adverse effects to existing water rights. As a result, reviews have become increasingly complex and time consuming. However, HB 40 (2009) modified the process for permit and change applications to assist in making the department's decisions more quickly and more visible to the public. Applications received are posted on the department's web site within 10 days of receipt. The department issues a preliminary decision on whether to grant or deny an application within 120 days of a correct and complete application. Potential objectors will know before the public notice of the application where the department stands on the application. The department is exploring potential ways to further streamline its permitting and change application processes and reduce costs to applicants. Public meetings were held in Helena, Kalispell, and Billings in June 2012 to discuss preliminary ideas before proceeding to formal rule making.

When applicants and objectors are unable to settle their differences, the application moves into the hearing process. During FY 2012, 33 applications were in the hearings unit. Of those, three were remanded to the regional office for a decision because the objections were withdrawn (pre-HB40); five final orders were issued after

hearing held - one of which was appealed to District Court; five preliminary determinations were adopted after objections were settled; seven were withdrawn and the hearing vacated; seven have requested additional time and the hearing continued - one has been certified to the Water Court; and six are scheduled for hearing or awaiting final decision. In addition, one Administrative Rules hearing and one Controlled Groundwater Area rules hearing were held.

A Petition for Declaratory Ruling was submitted to the director from some senior water users requesting ARM 36.12.101(13) be declared invalid. The rule defines a "combined appropriation" under 85-2-306, MCA. The department conducted a public hearing on the petition on June 17, 2010. The department issued its decision August 17, 2010, ruling that the department finds the definition of "combined appropriation" (ARM 36.12.101 (13)) is consistent and not in conflict with applicable law under the Water Use Act, Section 85-2-101 et seq., MCA, and the certificates of water right issued pursuant to the statue and the rule are valid. The decision further stated that the department would begin the rulemaking process to adopt a new "combined appropriation" administrative rule definition due to changing times and increased pressure to use the exempt well statute. The 2011 Legislature passed HB 602 which established a process for the Legislature to provide direction for implementation of exempt well laws, required an interim study of issues related to exempt wells, and temporarily prohibited final rulemaking by the department for exempt wells, including the combined appropriation definition, until October 1, 2012.

House Bill 39 (2007) automated the process for updating water right ownership. It provided funding for developing a system to use the DOR's property tax database for updating water right ownership using property geocodes and water right legal land descriptions. Due to DOR upgrading the Orion database, the process for receiving and validating the owner data transfer has taken several months. The first dataset of new owners was validated and loaded into the water right database in October 2010. This fiscal year, the department processed 8,730 ownership updates involving 20,496 water rights. The Water Rights Bureau and regional office staff continue to conduct outreach to title companies, real estate companies, clerks and recorders, and attorneys about HB 39 requirements for water right sellers and property transaction closers.

Water Adjudication Bureau

Adjudication staff continued to work under HB 22 to expedite DNRC claim examination and issuance of Water Court decrees in the statewide adjudication process. Staff primarily consists of two centralized teams of examiners in Helena and individuals in all of the divisions eight Regional Offices. Claims examined through FY 2012 total 50,924. The final benchmark is 57,000 claims examined by June 30, 2015. Examination of claims occurred in the following basins: Rosebud Creek (42A), Flathead River (76LJ), Yellowstone River below Powder River (42M), Red Rock River (41A), Marias River (41P), Missouri River between Bullwhacker Creek and Musselshell River (40EJ), and Bitterroot River, Eastside (76HA).

Adjudication staff assisted the Water Court in the release of the following decrees: National Bison Range Compact and Basin 41T (Missouri River, from Marias River to Bullwhacker Creek). Adjudication staff also assisted the Water Court in post-decree activities across the state. Post-decree assistance primarily involves working with claimants and the Water Court to help resolve issue remarks on water rights. This assistance is generated through the on motion process (85-2-248) and cases resulting from objections by water users. Assistance includes meeting with claimants, conducting field investigations, mapping, and providing recommendations and technical reports pertaining to individual cases. In addition, assistance is requested by the Water Court to help with certified cases before and after the initial decree phase. Unique requests to help the Water Court resolve specific cases such as large basin mapping projects and other technical requests fall within the general assistance category.

Table W-4
Post Decree Assistance (July-June FY2012)

Case type	case count	work hours
Certified case	170	
85-2-248	258	5,398
Case	70	2,307
General assist		3,436
Total hours		**11,141**

To date the DNRC has prepared 40 enforcement projects at the request of the Montana Water Court. The number of projects administered by the District Courts varies from year to year; therefore all 40 projects are not under enforcement every year.Two of the projects were prepared for initial distribution during the 2012 irrigation season. DNRC and the Water Court maintain and update all enforcement projects every year. Within the enforcement

areas, approximately 9,400 points of diversion have been assigned enforcement numbers. All types of active surface water rights are included in these projects which total 6,136. These include water rights from both the New Appropriations Program (post-1973 rights) and the Adjudication Program (pre-1973 rights).

Water Resources Offices

Billings

The Billings Office provided support for all Water Resources Division programs and services for citizens in southeastern and south central Montana. Staff continue to provide a significant amount of assistance and education via phone calls. Office staff are taking stream measurements on from four to six sources to identify whether water will be available for new water use from the sources. Adjudication staff worked with claimants and the Montana Water Court to resolve issue remarks on water right claims on the Tongue, Rock Creek, and Yellowstone River basins. The Billings office added a hydrologist/specialist to its staff since more technical and scientific reviews are required for water right applications. The office engineer performs annual inspections of local state projects (Tongue River Reservoir, Cooney Reservoir, and Glacier Lake), reviews applications for floodplain permits, and reviews dam safety hazard classifications from across the state. The engineer is drafting plans for a riprap repair on Cooney Reservoir. Office staff continue to match geocodes to water rights to facilitate an automated water right ownership update based on land ownership.

Bozeman

Bozeman Office staff continued to provide support to division programs, with the majority of the work dealing with water rights, adjudication, and state projects. The Bozeman Office was able to expand technical abilities by converting a water resources specialist position to a hydrologist/water resources specialist position. Staff continue to see a large volume of walk-in traffic and calls from the public in the three-county region asking questions and requesting information related to water resources. Staff work closely with local water commissioners. Adjudication staff worked with the Water Court on post-decree assistance as well as claims examination in the Red Rock River Basin and review of enforcement projects.

Glasgow

The Glasgow Water Resources Office provided support to all division programs, with emphasis on water rights, state-owned irrigation projects, dam safety, and floodplain program assistance. Glasgow Office staff provided public assistance, records research, and water use application processing and responded to violations of the Water Use Act. Glasgow staff has also responded to numerous calls regarding the U.S. Fish & Wildlife Service compact currently in negotiations with the Reserved Water Rights Compact Commission. Water right adjudication staff continued claims examination in the Lower Yellowstone River (Basin 42M) and provided post-decree assistance to the Montana Water Court for several other basins. Water management activities included Glasgow staff assistance to the Milk River Rehabilitation Working Group in developing a long-term solution to water shortages, a failing infrastructure, and Milk River Project re-authorization legislation and funding. Staff also continued to serve eastern Montana conservation districts by maintaining their water reservation database records, and providing technical assistance and provide training. The demand for water for oil field development in eastern Montana has increased substantially. These demands include water for trailer parks, “man camps,” gravel washing, drilling fluids, and hydraulic fracturing. The “oil boom” has kept the Glasgow staff busy providing public outreach, training, and processing applications.

Havre

The Havre Office provided regional support for all of the bureaus within the division. Work completed for the Adjudication Bureau included the continued examination, of water rights claims in the Marias River (Basin 41P), preparation and transmittal of the Upper Milk River (Basin 40F) summary report to the Water Court, and provided post-decree assistance to the Water Court in the Middle Milk River (Basin 40J) and the Teton River (Basin 410). Work performed for the Water Rights Bureau included the processing of new water users and enforcement. Substantial work was completed to update water right geocodes for the automated ownership update process. Water management activities included providing technical assistance to local, state, federal, and international water users, associations, and government agencies. Implementation of floodplain regulations and map survey work continued. Water operations efforts included working with multiple dam owners on safety, evaluation, and maintenance of existing private and state-owned dams. The Havre office also assisted with the repair and installation of the outlet structure at Frenchman Reservoir.

Helena

The Helena Office (HO) is responsible for those counties that encompass the closed basins of the Upper Missouri and Upper Clark Fork Rivers. The significance of the closed basin counties is that it requires new water

appropriation applications to be accompanied with a change application for the purposes of mitigating the consumed water of a new water right. The result is the applicant and staff must prepare additional material and conduct additional analysis on each application submitted. Due to the closed basin and the increased analysis, the HO staff is spending more time meeting with applicants, which has proven to be very beneficial, by providing the necessary information and guidance to applicants to understand the criteria for issuance of a permit found in 85-2-311 and changes in appropriation rights found in 85-2-402, MCA.

The staff continues to see increased requests for exempt groundwater wells for domestic, lawn, and garden wells, as the economy and other factors see growth and increased demand for water. More people are using the exempt well application for other purposes, from ponds to stock water to wildlife.

The adjudication staff is completing post-decree work in the Big Hole Basin (41D) and Beaverhead basins (41A and 41B). In addition, staff is working on ownership updates on priority basins that will be going to post-decree in the near future, such as 41A and 41B.

Ownership updates and processing of geocodes for land identification is progressing. Coordination with other agencies and the private sector has resulted in the staff seeing the benefits of the process.

The staff is handling more walk-in inquiries concerning water right applications and other aspects of the process. The public is also seeking more staff help with water right research and general questions, partially due to the increased complexity of the water right regulations. The staff is taking a more aggressive approach to its complaint and enforcement program.

Staff continues to assist in implementation of other Water Resources Division programs including review of filed water right complaints, work on assigned state water projects such as Ruby Dam rehabilitation, assistance with floodplain management, and dam safety programs reviews.

Kalispell

The Kalispell Office (KO) staff supported division programs, with emphasis on: water right permitting, examination of Flathead Basin (76LJ) claims and Water Court assistance, floodplain regulation assistance to Flathead County, and evaluation of high hazard dams. KO staff provided technical assistance to ongoing negotiations regarding the Water Right Compact for the Confederated Salish and Kootenai Tribes of the Flathead Reservation. Substantial staff time continues to be devoted to the task of automating the ownership update process by matching geocodes with water rights.

Lewistown

The Lewistown Office provided support to all division programs, with emphasis on water rights, state-owned irrigation projects, dam safety, federal reserved water compacts, floodplain program assistance, and watershed group assistance. After the devastating flood of 2011, priority was placed on assisting Musselshell River water users in planning the reconstruction of irrigation infrastructure along the river corridor. This was accomplished through site visits and evaluations, and participation in the Musselshell Watershed Coalition. Water right adjudication claims examination continued in the Missouri River Basin, between Bullwhacker Creek and the Musselshell River (Basin 40EJ), as well as post-decree public assistance throughout many basins in central Montana. Applications for new water rights and changes to existing water rights were processed. Assistance was provided to the Reserved Water Rights Compact Commission in negotiations for compacts for the Bureau of Land Management and Fish and Wildlife Service. Engineering staff conducted technical evaluations for high hazard dams, assisted county administrators with floodplain assessments, and provided construction oversight for projects at state-owned irrigation reservoirs. Water management activities included participation in various watershed committees and working groups in the Missouri River Basin. Substantial work was also completed to match geocodes with water rights to facilitate the water right ownership update process.

Missoula

The Missoula Regional Office (MRO) provided continued support of all Water Resource Division programs. Adjudication staff is examining remaining claims in sub-basin 76H and providing assistance to the Montana Water Court in sub-basin 76F. New appropriations staff is meeting all statutory deadlines for water right permit and change application processing and has processed complex applications in closed basins and prepared the first marketing for mitigation change application. MRO staff assists the State Water Projects Bureau with weekly inspections of Fred Burr Dam, monthly inspections of East Fork Rock Creek Dam, and continued operation of Painted Rocks Reservoir. For the first time in several years, MRO is fully staffed, with the new compliance technician processing 119 notices of completion in her first six months on the job. The MRO hydrologist continues to provide technical assistance to the Reserved Water

Hydrologist training. Photo by Mike Roberts.

Rights Compact Commission while also processing Forest Service instream flow applications. A considerable amount of time was spent on the Department of Revenue ownership update process, with 977 ownership updates processed since January 1, 2012.

Web sites featured in this section:

www.dnrc.mt.gov/wrd
www.dnrc.mt.gov/wrd/water_proj/
www.dnrc.mt.gov/wrd/water_proj/dam_pages.
http://nris.mt.gov/Drought/status/
www.mo-rast.org/
www.mrric.org
www.moriverrecovery.org
www.mtfloodplain.mt.gov
http://nris.mt.gov/dnrc/waterrights

Appendix A

Allocation of Funding Sources for Natural Resource Programs

This summary describes the flow of revenue to natural resource project accounts in State government. Revenue sources and programs shown in bold are represented on the flow chart (Figure A-1) located at the beginning of this document.

Revenue Sources

1. The **Resource Indemnity Groundwater Assessment Tax (RIGWA)** is a 0.5% tax of the gross value of the product of certain mineral mining. The tax was originally created in 1973. Mineral production, on coal, small metal mine production, talc, vermiculite, limestone, and other *"nonrenewable merchantable products extracted from the surface or subsurface of the state of Montana"* (15-38-103, MCA). Proceeds from the RIGWA tax go toward groundwater assessment, bond debt service for the Libby cost share, and various natural resource programs.
2. Title 15, Chapter 38, MCA, created a **Resource Indemnity Trust Fund** to indemnify the citizens of Montana for depletion of the state's natural resources and for environmental damage from mineral development. The trust was funded with proceeds from resource extraction taxes until the trust balance reached $100 million, which occurred in December 2001. Deposits to the resource indemnity trust fund ceased at that point, and the balance has remained at $100 million. Income from the trust fund is used to fund environmental and natural resource programs.
3. **Oil and Gas Production Tax** is distributed to counties affected by oil and natural gas production and to the natural resources state special revenue accounts. The 1995 Montana Legislature replaced all existing extraction taxes on all oil and natural gas production with a single production tax based on the type of well and type of production. Other programs funded by this tax include the coal bed methane protection account, the orphan share account, and the Montana University System state special revenue account. This tax has been effective since January 1, 1996.
4. **The Metalliferous Mines License Tax** is levied on the owner of any mine extracting metals, and precious, or semiprecious gems. Proceeds are distributed to the state general fund, the hard-rock mining impact trust account, the hard-rock mining reclamation debt service fund, the natural resources operations state special revenue account, and to counties adversely affected by mining.

Natural Resource Programs

A. The **Groundwater Assessment Account** was created in 1991 (85-2-901 et seq., MCA) to fund a statewide groundwater assessment program that monitors the quantity and quality of the state's groundwater. The program is staffed by the Montana Bureau of Mines and Geology in Butte. An oversight committee reviews all expenditures, approves monitoring sites, prioritizes areas, coordinates information, and evaluates reports.

B. The **Environmental Contingency Account** was created in 1985 (75-1-1101 et seq., MCA). The Governor has the authority to approve expenditures from this account to meet unanticipated public needs. Specifically, the statute limits projects to those that (1) support renewable resource development in communities that face an emergency or imminent need for the services or to prevent the failure of a project; (2) preserve vegetation, water, soil, fish, wildlife, or other renewable resources from an imminent physical threat or during an emergency, not including natural disasters or fire; (3) respond to an emergency or imminent threat to persons, property, or the environment caused by mineral development; and (4) fund the Environmental Quality Protection Fund. Each biennium, $350,000 of the RIT interest earnings is allocated to this account until the balance in this account reaches $750,000.

C. The **Oil and Gas Production Damage Mitigation Account** was created in 1989 (82-11-161, MCA). The Board of Oil and Gas Conservation may authorize payment for the cost of properly plugging a well and reclaiming and/or restoring a drill site or other drilling or producing area damaged by oil and gas operations. The site must be abandoned, and the responsible person either cannot be identified or refuses to correct the problem. Each biennium, $50,000 of the RIT interest earnings is allocated to this account. The balance in this account cannot exceed $200,000.

D. The **Water Storage State Special Revenue Account** was established in 1991 (85-1-631,

MCA). The purpose of the account is to provide funding for projects that rehabilitate existing water storage facilities or develop new ones. Priority is given to high hazard, unsafe dams. Each biennium, $500,000 of RIT interest earnings is deposited into this account.

E. **The Natural Resource Projects State Special Revenue Account** receives funding from Resource Indemnity Trust (RIT) interest earnings, RIGWA, and the Oil and Natural Gas Production Tax (85-1-604, MCA). This Account funds projects managed under the following two programs:

   The Renewable Resource Grant and Loan Program, created in 1993. The purpose of the grant program is to fund projects that conserve, develop, manage, and preserve water and other renewable resources. (85-1-602, MCA).

   The **Reclamation and Development Grants Program**, established in 1987. Purposes of the program are: (1) to repair, reclaim, and mitigate environmental damage to public resources from nonrenewable resource extraction; and (2) to develop and ensure the quality of public resources for the benefit of all Montanans (90-2-1101, MCA).

F. The **Natural Resources Operations State Special Revenue Account** receives RIT interest earnings, and Oil and Natural Gas Production Tax proceeds, (90-2-1104, MCA). The revenues are used to fund administration of natural resource agencies, including the administration of the Renewable Resource Grant and Reclamation and Development Grants Programs, and state agency costs.

G. The **Hazardous Waste Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Account** is administered by the Department of Environmental Quality (75-10-601 et seq., MCA). This account receives 26% of remaining RIT interest earnings and 25% of excess RIGWA tax. The account was established in 1983 and used to make payments on CERCLA bonds, implement the Montana Hazardous Waste Act, and provide assistance in remedial actions under CERCLA.

H. The **Environmental Quality Protection Fund** was established in 1985 and is administered by the Department of Environmental Quality (DEQ) (75-10-704 et seq., MCA). This account receives 9% of the remaining RIT interest earnings and 25% of excess RIGWA tax. The purpose of this account is to provide funding for remedial actions taken by the DEQ in response to a release of hazardous or deleterious substances.

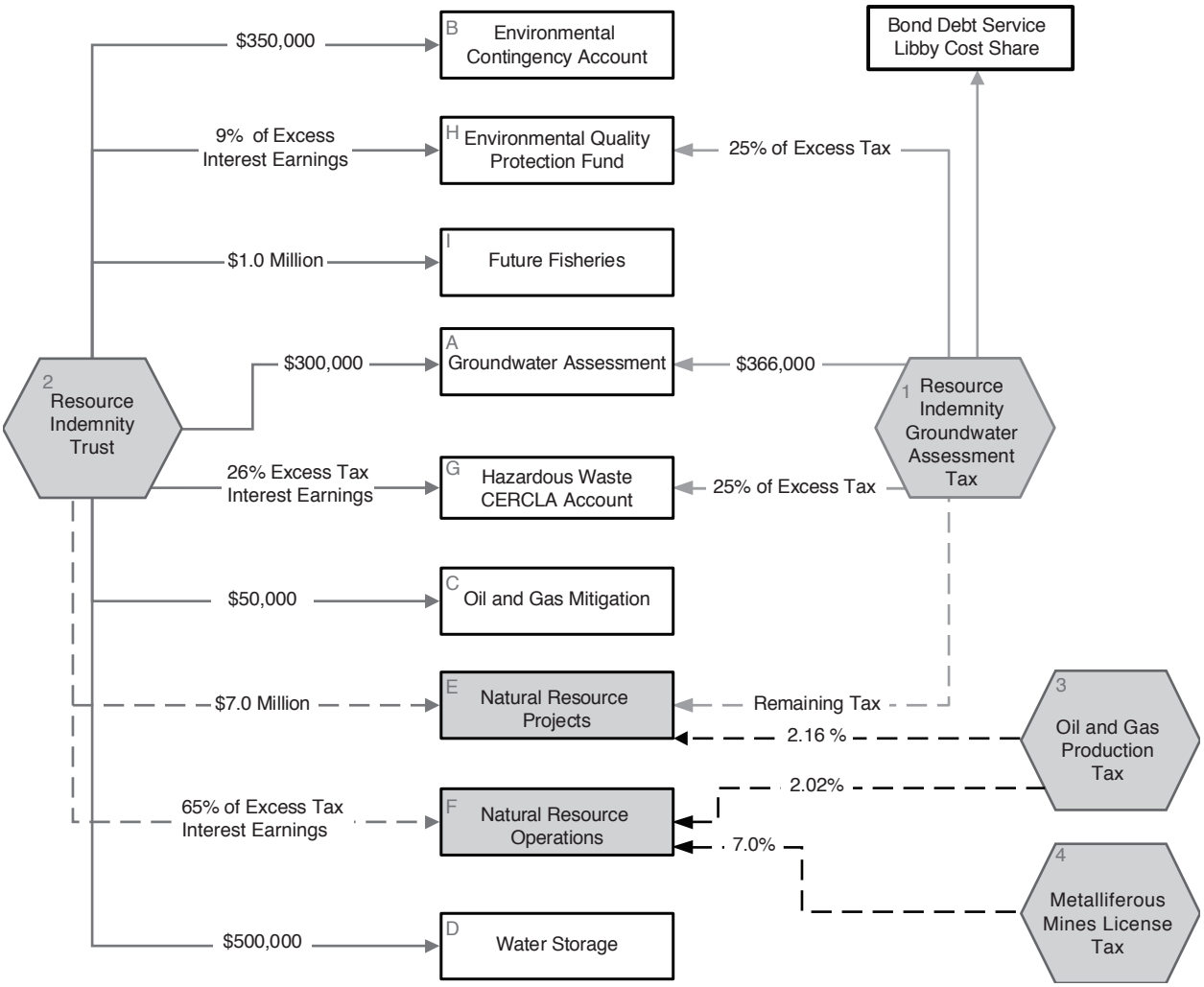
I. The **Future Fisheries Improvement Program** was created by the 1995 Legislature to restore essential habitats for the growth and propagation of wild fish population in lakes, rivers, and streams. In 1999, the Legislature expanded the program by adding funding from the RIT and directing a portion of the funding to projects that specifically enhance bull trout and cutthroat trout, with emphasis on mineral reclamation projects.

Coal Severance Tax

Within 30 days of the end of each calendar quarter, coal severance taxes are paid to the state, and 50% of these are deposited into the **Coal Severance Tax Trust Fund** by the DOR (see Figure A-2 and Table A-1). Six accounts are established within the Trust: (1) the **Coal Severance Tax Bond Fund**, (2) the **Treasure State Endowment Regional Water System Fund**, (3) the **Big Sky Economic Development Fund**, (4) the **Treasure State Endowment Fund**, (5) the **Coal Severance Tax Permanent Fund**, and (6) the **Coal Severance Tax Income Fund** (see Figure A-3).

1. Coal tax revenues that flow into the trust are initially deposited into the **Coal Severance Tax Bond Fund** (Bond Fund) and made available for payment of debt service on Coal Severance Tax Bonds (see Figure A-1). The DNRC informs the DOR, during the first quarter of each state fiscal year, of the amount necessary to meet all principal and interest payments on bonds payable from the Bond Fund for the next year (two semiannual payments). The DOR retains that amount in the Bond Fund.
2. The **Treasure State Endowment Regional Water System Fund** was established to provide state funding for regional water systems. Initially, the Rocky Boy's North Central Regional Water Project and the Fort Peck/Dry Prairie Regional Water System were authorized. Two additional regional systems are being formed. During the first quarter of each state fiscal year, 25% of the amount in excess of what is retained in the Bond Fund is deposited into the Regional Water System Fund.
3. The 2005 legislature created the **Big Sky**

Figure A-1
Resource Indemnity Trust Interest and the Resource Indemnity Groundwater Assessment 2013 Biennium



Economic Development Fund. This fund provides interest earnings for grants and loans used for economic development projects working with local governments and certified regional development corporations. During the first quarter of each state fiscal year, 25% of the amount in excess of what is retained in the Bond Fund is deposited into the Big Sky Economic Development Fund. The program is administered by the Department of Commerce,

4. The **Treasure State Endowment Fund** (Endowment Fund) was established when voters approved the ballot measure on June 2, 1992. During the first quarter of each state fiscal year, 50% of the amount in excess of what is retained in the Bond Fund is deposited into the Endowment Fund. The Department of Commerce notifies the DOR when interest earnings are needed to fund local infrastructure projects. The DOR then transfers the interest earnings from the Endowment Fund into the **Treasure State Endowment Special Revenue Account** (Revenue Account). The Department of Commerce then approves disbursement of funds to authorized local governments. Interest earnings not transferred to the Revenue Account for projects are retained in the Endowment Fund.
5. The **Coal Severance Tax Permanent Fund** (Permanent Fund) receives no new tax proceeds. The fund balance within the trust is invested by the Board of Investments. The earnings from the Permanent Fund are deposited into the

Table A-1
Allocation of Coal Severance Tax

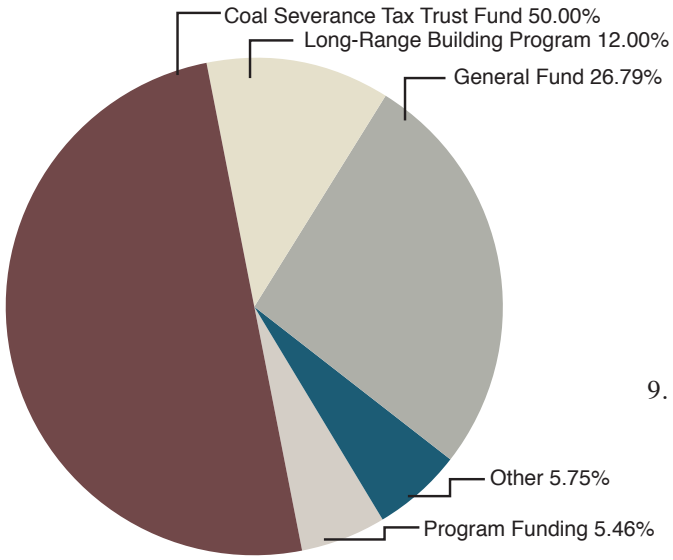
	Tax Allocation	FY 2011 ($1,000)	FY 2012 ($1,000)
Coal Severance Tax Collections	100%	$ 54,508	$ 53,188
Coal Severance Tax Trust Fund	50.00%	27,254	26,594
General Fund	26.79%	14,602	14,249
Long-Range Building Program	12.00%	6,540	6,382
Program Funding	5.46%	2,976	2,904
Other			
Oil, Gas, and Coal Natural Resources	2.90%	1,580	1,542
Parks Acquisition and Management Trust	1.27%	692	675
Renewable Resource Loan Debt Service	0.95%	517	505
Cultural and Aesthetic Trust and Capitol Art	0.63%	347	339

General Fund. State law allows up to 25% of the Permanent Fund to be invested in the Montana economy.

6. Investment income on the deposits in the Bond Fund, and the Permanent Fund is periodically transferred into the **Coal Severance Tax Income Fund**. The entire balance in the Income Fund is transferred into the General Fund on a monthly basis.

7. Under the Coal Severance Tax Loan Program, the state sells coal severance tax bonds and loans the proceeds to local governments for various infrastructure projects. The borrowers make semiannual or annual loan payments, which upon receipt are credited to a **Debt Service Account.** The terms of the loans vary, but generally involve an interest rate subsidy for the first five years of the loan followed by a direct pass-through of the interest rate on the state bonds for the remaining life of the loan. The loan program and debt service accounts are administered by DNRC.

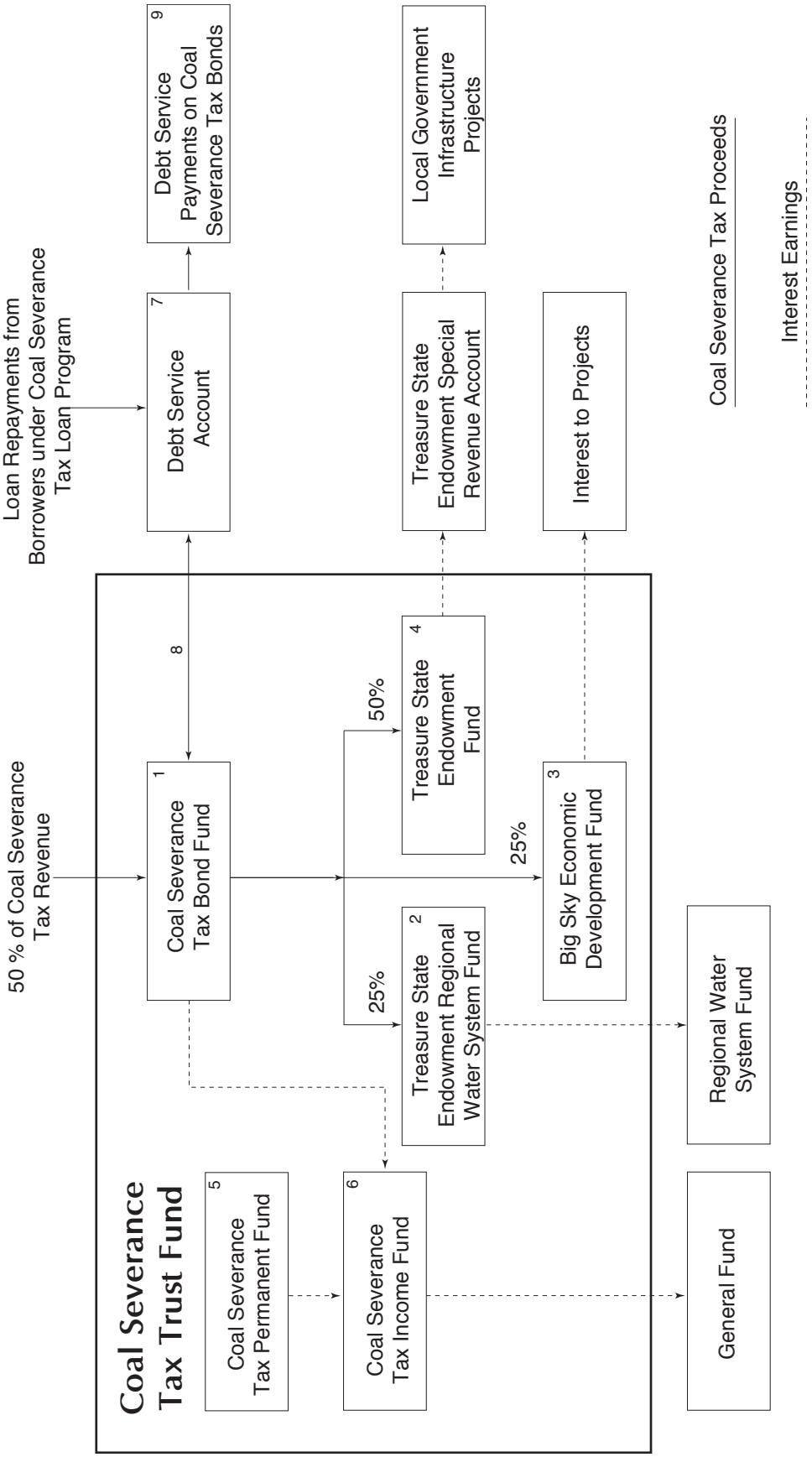
Figure A-2
Allocation of Coal Severance Tax



8. Debt service payments on the bonds are due each June 1 and December 1. To the extent that funds on hand in the Debt Service Account are insufficient to pay principal and interest on the bonds when due, funds are transferred into the Debt Service Account from the Bond Fund. On January 1 of each year, funds are transferred into the Debt Service Account from the Bond Fund to the extent necessary to cause the balance in the Debt Service Account to equal one-twelfth of the next two ensuing semiannual debt service payments. DNRC provides written notice to the DOR if funds are needed to pay debt service or to make the required transfer on January 1. On January 1 of each year, DNRC also sweeps the Debt Service Account of funds in excess of one-twelfth of the next two ensuing semiannual debt service payments. The excess is returned to the Bond Fund in repayment of borrowed money, if necessary, or deposited into the Renewable Resource Grant and Loan Program State Special Revenue Account.

9. On each June 1 and December 1, the state pays debt service on the bonds from amounts on hand in the Debt Service Account. Payments are made by DNRC.

Figure A-3
Coal Severance Tax Trust Fund Flow of Funds Summay



Acronyms

ARRA..... American Recovery and Reinvestment Act
AUMs..... animal-unit-months
BMPs..... Best Management Practices
BOGC ..... Board of Oil and Gas Conservation
BOR ..... U.S. Bureau of Reclamation
BRO ..... Billings Regional Office
CARDD..... Conservation and Resource Development Division
CD ..... Conservation District
CDB ..... Conservation Districts Bureau
CERCLA..... Comprehensive Environmental Response, Compensation, and Liability Act
CGA ..... Controlled Groundwater Area
CRP ..... Conservation Reserve Program
CSKT ..... Confederated Salish and Kootenai Tribes
CTP ..... Cooperating Technical Partners (Program)
CY ..... calendar year
DEQ ..... Montana Department of Environmental Quality
DFIRM..... Digital Flood Insurance Rate Map
DFWP..... Montana Department of Fish, Wildlife & Parks
DNRC ..... Montana Department of Natural Resources and Conservation
DOR ..... Montana Department of Revenue
DWSRF..... Drinking Water State Revolving Fund
EPA..... U.S. Environmental Protection Agency
F&AMB ..... Fire and Aviation Management Bureau
FEMA..... Federal Emergency Management Agency
FHBM ..... Flood Hazard Management Map
FIRM..... Flood Insurance Rate Map
FRIMA..... Fisheries Restoration Irrigation Mitigation Act
FWS ..... U.S. Fish and Wildlife Service
FY..... fiscal year
GIS ..... Geographic Information System
GPS ..... Global Positioning System
GRO ..... Glasgow Regional Office
HCP..... Habitat Conservation Plan
IT..... Information technology
KMG ..... Keep Montana Green
MACD..... Montana Association of Conservation Districts
MBMG..... Montana Bureau of Mines and Geology
MCA..... Montana Code Annotated
MCF ..... thousand cubic feet
MEPA..... Montana Environmental Policy Act
MMBF..... million board feet
MRCDC ..... Missouri River Conservation Council
MSCA ..... Montana Salinity Control Association
MSU..... Montana State University
MWCC..... Montana Watershed Coordination Council
NRCS ..... Natural Resources Conservation Service
NRIS ..... Natural Resources Information System
Project WET..... Water Education for Teachers
RC&D ..... Resource Conservation and Development (Areas)
RDB ..... Resource Development Bureau
RDGP..... Reclamation and Development Grants Program
REMB ..... Real Estate Management Bureau
RFP..... request for proposals
RIGWA..... Resource Indemnity Groundwater Assessment
Risk MAP..... Risk Mapping, Assessment, and Planning (Program)
RIT ..... Resource Indemnity Tax
RMS ..... Resource Management Section
RRGL..... Renewable Resource Grant and Loan (Program)
RWRCC ..... Reserved Water Rights Compact Commission
SFLMP..... State Forest Land Management Plan
SLI..... stand-level inventory
SMZ ..... Streamside Management Zone
SRF ..... State Revolving Fund
SWPB..... State Water Projects Bureau
TLMD ..... Trust Land Management Division
TMDL ..... total maximum daily load
TSS..... Technical Services Section
UCF..... Urban and Community Forestry
UIC..... Underground Injection Control
USDA..... U.S. Department of Agriculture
USFS ..... U.S. Forest Service
USGS ..... U.S. Geological Survey
WATLP..... Whitefish Area Trust Lands Neighborhood Plan
WMB..... Water Management Bureau
WPCSRF..... Water Pollution Control State Revolving Fund
WRD ..... Water Resources Division
YRCDC..... Yellowstone River Conservation District Council

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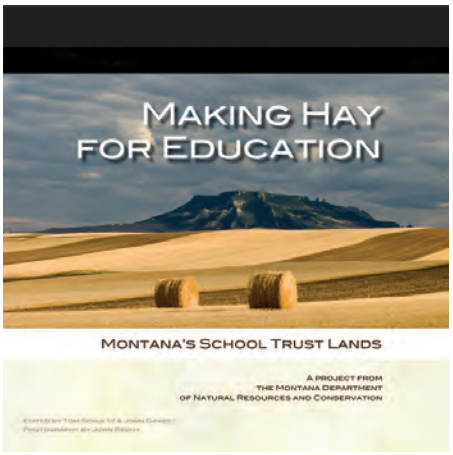

Making Hay for Education

110 pages, 96 color photographs

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